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Epiphyllum truncatum.



MAY, 1888.

ARBOR DAYS, their appointment and observance, are the most direct and formal expression of the public indicating its recognition of the importance of the subject of forestry. Arbor days have been appointed in several of the States for the purpose of encouraging the planting of trees—these days being devoted to tree planting, and other business in great measure suspended.

The design in the institution of these days is a good one. That tree planting and the protection of our forests are real needs are admitted facts by all who have given sufficient attention to the subject. The need of tree-planting is more appreciated in the western, forestry in the older

settled States, and both to a considerable extent everywhere. That the forests must be conserved while certain available portions of the timber are intelligently selected and cut for use, and that tree-planting should progress are widely accepted facts, and the public is interested to know how best to deal with them. Arbor days, in those States where instituted, have had the effect to awaken attention and interest in these

subjects and to promote tree-planting. Their good effect has been so apparent that in most States their importance has been acknowledged. Two years since the Legislature of this State passed by both houses a bill to make the 20th day of April an Arbor day for this State, but it was vetoed by the Governor for a reason that seemed to him sufficient. A Board of Forest Commissioners was, however, appointed, whose special work was to examine the condition of the Adirondack forests, and suggest the neces-

sary measures for its conservation. This Board, it is now understood, has done nothing, or little of any value, and the destruction of the forests of the Adirondack region is progressing with great rapidity. This region is comparatively valueless agriculturally, but is elevated, and the source of most of the streams of the eastern and northern parts of the State. The destruction of the forests of that region will have the effect to cause a rapid flow of all the streams during a rainy time and their shrinkage to mere brooks, or entire cessation of flow, in times of drought. This would be an untold calamity to all interests throughout the region watered by these streams.

What is now needed is a public opinion so strong and self-asserting as to make law that shall properly regulate the forest affairs, not only of the Adirondack region, but of the whole State. The proper presentation of the facts through the press will have this tendency. The passage of the Arbor Day bill, two years ago, undoubtedly would have been similarly effectual to some extent, at least. Still it is our opinion, and has been for several years, that Arbor days for tree planting will be effective only temporarily; for a time they will be observed more or less, but unless supplemented by other efforts will very soon lose their interest and fail of observance in the manner intended. With the right leadership the features of the day may be changed so as to continue the interest in tree-planting and forestry; this is the real end the day should subserve.

To make this subject clear a short explanation will suffice. Illinois has an Arbor Day, but the people have discovered that they cannot all unite on the same day in the work of tree planting. The time to transplant trees in the southern part of the State is too early in the northern, and the proper time in the northern part is too late in the southern. Somewhere the work must fail of being carried out. Now this is true of several western States that have appointed Arbor Days, it would be so in this State, it would be so in most States. Attention to this fact was called in our pages some years since. The Arbor Day is wanted, but not for the actual work of tree-planting; it should be a day of celebration, of festival, a day for the gathering of the

people in each community, young and old, of appropriate exercises with reference to the importance of the forests and the groves and the beauty of trees and the value of the timber supply. At these gatherings reports could be made of the tree-planting performed in the past year, and the plans of future work explained, speeches, music and song should enliven the occasion, and the enjoyments of the day could be made such that its return would be a delight to all, while by its observance the desired knowledge would be diffused, and a proper public spirit in regard to forestry would be maintained.

A bulletin of the Department of Botany and Forestry of the Agricultural College of Michigan, has lately been issued, containing "Hints on Arbor Day." The bulletin states that Arbor Day is already a holiday feature in the public schools of some of the States.

"In the State of Connecticut, where the movement has been under the direction of Professor B. G. NORTHROP, the school children have greatly beautified and enriched the State by the observance of Arbor Day. The school grounds all over the State have been changed from plain, cheerless, uninviting yards to attractive shady parks and groves. The roadsides, likewise, by application of the same deft hands and eager minds, have been lined with stately Elms, graceful Maples and beautiful shrubbery.

"Our own State (Michigan) has done something in this direction and especially so last year. The Arbor Day exercises at the State Agricultural College last spring were such as enlisted the hearty coöperation of the students and proved a most enjoyable affair, to be long remembered by those in attendance, and especially those participating.

"The exercises were opened with prayer and music. President WILLITS read the Governor's Arbor Day Proclamation and made a short speech. Brief and appropriate speeches were then made by Professors KEDZIE, BEAL and BAILEY. This part of the programme was pleasingly varied by music, songs, poems, declamations and recitations by the students. Each person speaking treated the subject from his standpoint, thus varying the remarks to such an extent that no chance of repetition was afforded.

"Governor LUCE and Senator C. J. MONROE also made short and pleasant speeches, endorsing Arbor Day, and expressing their sympathy with the movement. Both agreed that its influence on the education and morals of the youth was inestimable; that it would soon become a universal custom; that it is a very appropriate factor in education, and that it ought to meet the entire approval and support of every school and college in the State."

After the above exercises several class trees were planted, accompanied by short speeches and songs.

A very interesting bill, which is in the right direction, is now before the Legislature of this State, unless it shall have become a law before these lines shall meet the eyes of our readers, as probably it may. The bill provides as follows:

"That Saturday following the first day of May in each year shall hereafter be known throughout this State as Arbor Day.

"It shall be the duty of the authorities of every public school in this State, to assemble the scholars in their charge on that day in the school building, or elsewhere, as they may deem proper, and to provide for and conduct, under the general supervision of the School Commissioner, or other chief officers having the oversight of the public schools in their county or municipality, such exercises as shall tend to encourage the planting, protection and preservation of trees and shrubs, and an acquaintance with the best methods to be adopted to accomplish such results.

"The Forest Commission of this State shall have power to prescribe from time to time, in writing, a course of exercises and instruction in the subjects hereinbe-

fore mentioned, which shall be adopted and observed by the public school authorities on Arbor Day, and upon receipt of copies of such course, sufficient in number to supply all the schools under their supervision, the School Commissioner or other chief officers aforesaid shall promptly provide each of the schools under his or their charge with a copy, and cause them to be adopted and observed."

It will be seen that the desired end is here sought by training the children of the schools. This is well, and it is to be hoped there will be no failure of the bill to become a law. After that we shall work for more; we want a day not only for the children, but for the whole community. It should be one of the most joyful days of the year, and the time specified in the present bill, the Saturday following the first day of May, is at an appropriate season. Our own preference has been for the first day of May, because May-day is historic with associations, like, in some degree, to the features of Arbor Day, and because these associations exist still, and meet with some recognition by the young people even where Arbor Days have not been instituted. It is a day which could be united on generally, and we believe that the importance of forestry is so great that with comparatively little effort there might be such concert of action as to secure the appointment by Congress of May-day as a National Arbor Day. Still, the main point is to unite on some day, the particular one is comparatively unimportant. Such action would undeniably be a means "to provide for the general welfare," and the tendency of the observance of the day would everywhere be for the good of all.

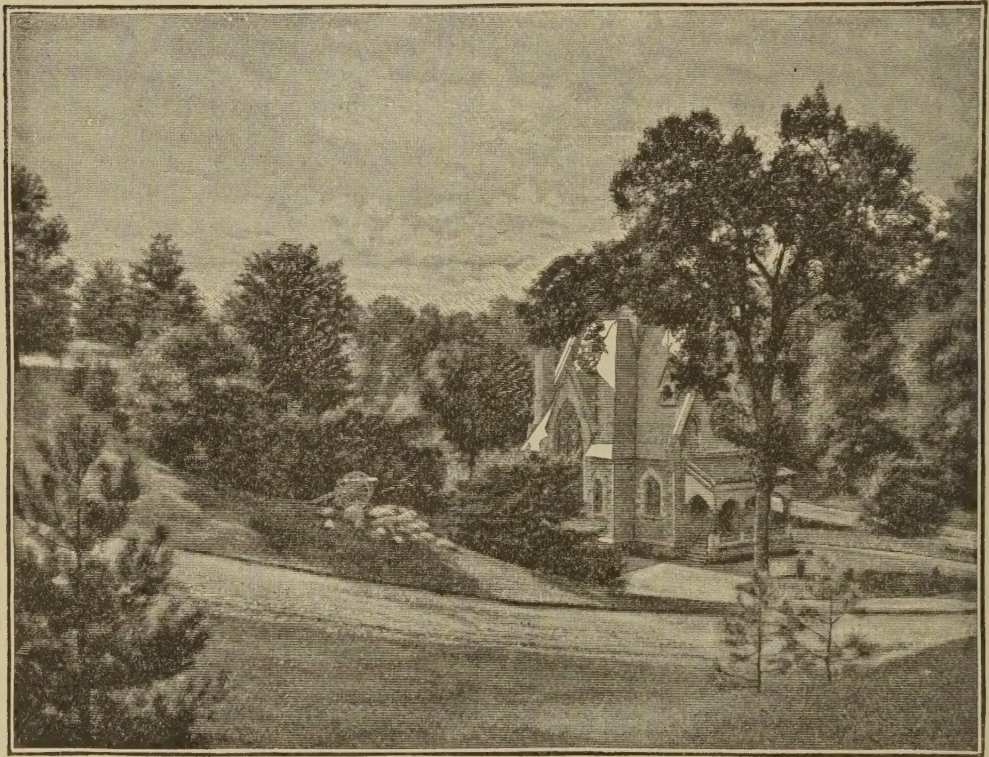
CEMETERY GROUNDS.

The refinement of our people which is manifested in well planted and neatly kept home grounds, and tidy streets and avenues lined with shade trees, is also indicated still more emphatically by the character and appearance of their burial places.

While many cemeteries, both east and west, are famous for their superior arrangements and great beauty, yet there is a work of no small magnitude to be performed in this respect by most communities all over our land. But we believe our people will be obedient to the spirit of this work, and, as fast as circumstances will admit, the burying grounds of the past will be remodeled and transformed, through prevailing good taste, and by the assistance of the gardener's art, into groves and lawns, presenting features similar to those of Spring Grove of Cincinnati, Ohio,

Laurel Hill and West Laurel Hill of Philadelphia, Greenwood, Mount Auburn, Woodlawn of Cleveland, Forest Grove of Buffalo, and others whose good reputation has gone abroad and made them famous.

While a small number of cemeteries connected with our great cities will always be prominent for their extent and the evidences of great wealth expended on them, there is no reason why those of small size should not be arranged as skilfully and kept as neatly as the same area in any of the larger places. The impulses of our nature demand that these last resting places shall be beautiful. When we carry to them all that remains to us of our nearest and dearest friends, it is some consolation that we can leave them where the rays of the summer sun stream through cooling screens of innumerable leaves, and where the winds sigh requiems through the branches of noble trees; where a vigilant care secures from molestation, and where we may return to mourn or meditate with a sense of surrounding beauty.



VIEW OF CHAPEL AND ADJOINING GROUNDS AT GLENDALE.

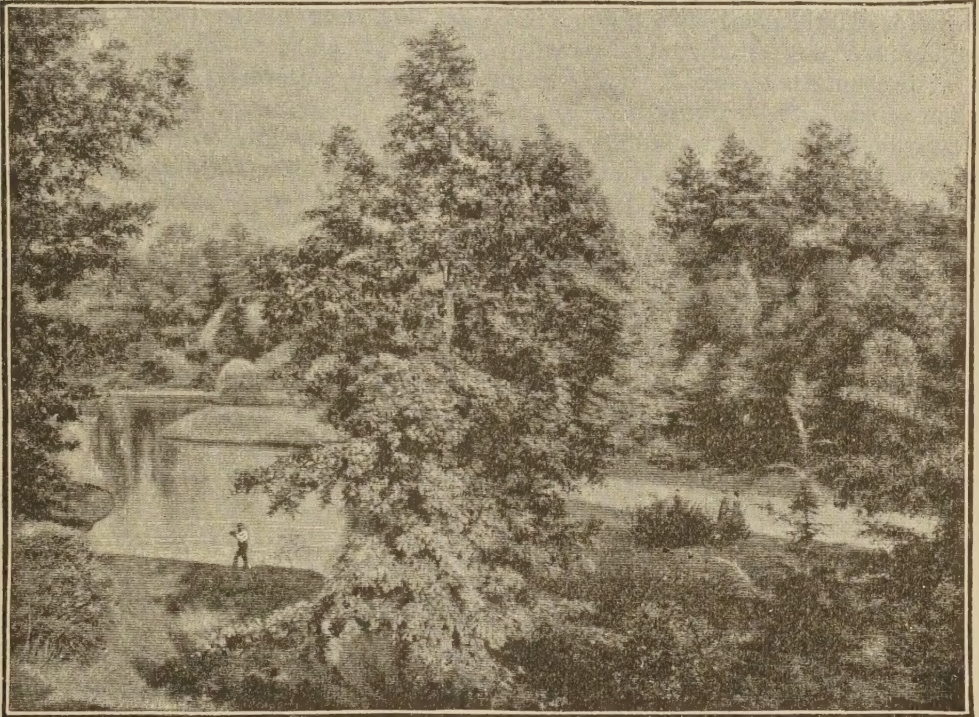
The establishment and care of cemeteries by associations or corporations of individuals is a method that has proved its superior efficiency, and its adoption by all villages and cities is to be advised in preference to municipal, village or township management. In the former case there is more direct control and responsibility; the proper arrangement and management of the grounds can be better effected; necessary rules and regulations can be more surely enforced, and, altogether, the public can be better served than when it attempts to serve itself.

What is known as the park method of arrangement of the grounds is productive of the greatest beauty, and it is in accordance with this method that all the finest cemeteries are now planned and laid out. The driveways and walks, while they give easy access to all parts of the place, are made to conform to the nature of the land, winding and curving as may be necessary to follow, to a great extent, the lower parts of the grounds, or else those other parts which the nature of broken grounds may require. Trees and shrubs are planted where they will produce the finest landscape effect, and planting by individual lot owners is restricted to low-growing shrubs and plants, and, even then, it is in all cases subject to the supervision and consent of the directors or their agent. While individual liberty is

thus somewhat restrained, good taste and general satisfaction prevails. The ground is kept at an even surface, and the care of the whole of it during the growing season devolves upon one person, who sees that the grass is kept mowed, so that it always presents a lawn-like appearance. Roads and walks are kept in order and free from weeds, and any litter that may be made is quickly removed.

Among the cemeteries of medium size, one of the most beautiful and well kept is that of Glendale, at Akron, Ohio, whose citizens are among the most cultivated, wide-awake and progressive in the country.

As an example of the manner in which the funds arising from the sale of lots in a cemetery may be securely invested for the perpetual care of the grounds, that of Glendale may be offered. It was enacted by the General Assembly of the State of Ohio.



VIEW IN GLENDALE CEMETERY.

“That the city council of the city of Akron be and are hereby authorized and empowered to receive any moneys from the Akron Rural Cemetery Association, an association organized under the laws of Ohio, and having a cemetery within the limits of said city, and to hold and constitute said moneys so received an irreducible fund for the use and benefit of said association, in the aggregate not exceeding fifty thousand dollars (\$50,000.00); and in consideration of the receipt thereof, to pledge the faith and credit of said city to the payment of interest thereon at the rate of six per centum per annum, payable semi-annually, forever, to said association; and all interest so accruing shall be paid to said association, which shall be applied and expended for the purpose of maintaining the improvements of said cemetery, as its directors may direct; and it shall be the duty of said council to provide, and it shall provide, for the payment of said interest as it becomes payable, in the manner it provides for the payment of other debts and liabilities of said city: provided, that said money shall be applied to the bonded indebtedness of said city, should such bonded indebtedness exist at the time of its receipt.”

The area of Glendale is about sixty-five acres: the surface is in part rolling, and some portions consist of bold bluffs, deep ravines and jutting points, features which have demanded skill of a high order to mould into subserviency of the general purpose, but the work has been accomplished in a manner that excites admiration at

every point. A small stream of water runs through the whole extent of the grounds, and this has been beautified by appropriately planting its margin. Not far from the main entrance the water broadens out into a handsome pond, adding much to the appearance of this part of the grounds. A view at this point is seen in one of the accompanying engravings, while in the other is shown the chapel on the opposite side of the roadway and a little nearer and facing the entrance. At the right of the entrance is a neat and tasteful two-story stone building of cottage style, which is occupied by the Superintendent and family, and contain, also, the Superintendent's office and rooms for the transaction of business relating to the cemetery. At the left of entrance is the bell tower, of circular form, constructed of stone. Being on an elevated spot it stands out in bold relief.

The chapel is a beautiful piece of architecture, built of stone. It is a memorial building in honor of the soldiers of that vicinity who have served the country on the battle field. Underneath the edifice is a receiving vault of the best construction. There is much of interest connected with this structure, but which it is not our purpose at present to describe, nor yet the beautiful sarcophagi and monuments which are distributed around the cemetery.

The grounds have been planted with the greatest care, and present a large and pleasing variety of handsome trees and shrubs, both of native and foreign origin. A number of varieties of native Oaks, many fine specimens of Maples, Elms, Birches, Beeches, Willows, Pines, Spruces, Junipers, and other trees grace the ground. Groups of shrubs are appropriately and tastefully set, and every part of the grounds present a pleasing appearance.

This cemetery, which was first commenced on a much smaller area than it now covers, was fortunately so situated that it could be extended in different directions as required. Much of the work on this place is due to the ability, energy and enthusiasm of the present Superintendent, Mr. A. H. SARGENT, who unites in one person in an eminent degree the character of engineer, landscape gardener and cemetery superintendent. For a cemetery of medium size the whole country affords no finer example than Glendale.

CRAB CACTUS.

The species of Cactus represented by the colored plate in this number is one of the most common in cultivation, and is so because of its real merits; and yet there are many, even who cultivate house plants, who have no personal knowledge of the plant, or, at least, have never raised it. The habit of the plant when grown in the natural style, as a dwarf, is shown by the figure at the base of the plate. This is the manner in which the plant is usually raised, and always will be more than in any other way. The pot should set on a small standard or a bracket. It is an excellent plant for a basket, and if properly cared for will improve for many years. The plant is sometimes grafted on a tall stock of *Pereskia aculeata*, and when grown makes a handsome pyramid. The grafts are inserted in stocks from four to six feet in height, and the fully developed plants of this height are from three to four feet through, and when in bloom are objects of great beauty. Still such plants can be successfully kept only where there are greenhouse facilities. Grafts are sometimes inserted on the long stems of *Cereus speciosissimus* and *C. grandiflora*, trained up the rafters of greenhouses, and from these the plants depend in masses. This species and other Epiphyllums, in their native country, Mexico, are epiphytic on trees, and also grow on rocks among the mosses. The Crab Cactus will grow in the greenhouse, like some Orchids, on a block of wood on a little cushion of sphagnum. When potted the plant needs good drainage, and a light and moderately rich soil. The plants bloom during the winter, and produce their flowers in great profusion and for a long time. The summer is their resting season, but even then they should not be allowed to go entirely dry; during autumn the supply of water should be very light, thus allowing the new growth to become firm. *Epiphyllum truncatum* should be selected as one of the number in the most select collection of house plants.

SOME MAINE APPLES AND PEARS.

Southeastern Maine was chiefly settled from Eastern Massachusetts and Southern New Hampshire. Although the vicinity of Portland (then Falmouth), and the lower Kennebec country, were occupied at an early day, the settlement of Maine went on very slowly until after the Revolution. But immediately after peace was declared, and for fifty years succeeding, there was a strong tide of emigration into "the District," as it was called. The immigration was made up, in great part, of the poorer of a large number of the best and oldest families of Eastern Massachusetts. Nearly all the old Pilgrim and Puritan names are represented there at the present day, often more numerous than in their old homes. Bradstreet, Winthrop, Emerson, Atherton, Abbott, Chase, Davenport, Elliott, Morton, Low, Prince, Phillips, Percival, Payne, Sewall, Shaw, Wentworth and Winslow, are names to be found in almost every town, representing the best blood of the old Colonial times, and quite as active and vital as it was two hundred years ago. The stories of Miss ORNE JEWETT deal largely with these early immigrants and their immediate descendants. I mention them here because it was by this class of settlers that fruit-growing was introduced and made successful, so that Maine is to-day the leading orchard State of New England.

Of course, the early orchards were nearly all seedling, for, as a veteran writer, in one of the earlier reports of the Maine State Pomological Society, observes, "in those days it was thought to require as much skill to set a scion and have it grow, as to amputate an arm or leg." But this very fact led to great care in the selection of the seed to be planted from the very best fruits known in Massachusetts, and the result has been such that a leading fruit-grower of the State has declared that if all the now leading and popular Apples of the country were to be lost, they could all be replaced without loss, and often with advantage, from the old seedling orchards of Maine. When, however, we consider the local character of many of the best fruits which refuse to flourish in perfection far from the place of their nativity, this statement

will have to be taken with some grains of allowance. Certainly, it must be confessed that a large number of the choicest native Apples of Maine, like those of Russia, Canada, and other northern regions, are not found to be long keepers, especially when planted farther south. Though Maine produces an immense quantity of Apples for home use and shipment, the area suitable to commercial orcharding is small in comparison with that of the whole State. Almost none of the seedling Apples of Massachusetts origin, even in the second or third generation in Maine, will endure very severe winters, and, in fact, the commercial Apples of Maine are to-day the Apples of Southern New England, with the single exception of the Northern Spy. It is hard to change the current of established trade. With the purpose of calling attention to a few of the best native Apples and Pears of Maine, really worthy of trial in the middle region between the section where all are hardy and that where few, or none, are so, I write this article.

Cole's Quince is, perhaps, the most widely known of Maine Apples, and in some western localities it has become quite popular. THOMAS says of it: "Large, oblate, conical, ribbed, yellow; mellow when ripe, mild, rich, high quince flavor; productive." Season, August. It is a fine cooking Apple before ripeness.

King Sweeting.—Of this the Maine Pomological Report says: "Fruit medium, regular, conical, skin yellow, flesh yellowish, crisp, tender, juicy and exceedingly sweet. Tree hardy and an abundant bearer. Emphatically a family Apple of the first-class, very popular where known. Season, August and September. This variety is sometimes known as 'Hightop Sweet,' from its habit of growth, but that name is pre-empted by a somewhat similar but inferior Massachusetts Apple of about the same season."

Moses Wood.—Fruit medium, round-oblate, yellow, beautifully striped with bright red. Flesh white, soft, crisp, very juicy, sprightly acid. Excellent for cooking, and a good dessert Apple. Tree vigorous and productive. August and September. This Apple looks like a Gravenstein, but is earlier and more acid.

Rolfe.—Fruit full medium, angular, yel-

lowish, shaded and striped with red. Flesh white, fine grained, tender, sub-acid, very good. Tree healthy and a good annual bearer. The Rolfe is growing rapidly in estimation as a popular and profitable market Apple. DOWNING has it under the name of "Macomber." December and January.

Gloria Mundi.—This is not the Monstrous Pippin of the books, to which the name is often given, but a fine, large, yellow, blushed Apple, with yellow flesh, fine texture, juicy, sprightly sub-acid; tree productive, and fruit remarkably free from defects; "every way desirable." September and October.

Somerset.—This is another Apple of the Gravenstein type, larger than Moses Wood, with more color and a milder, richer flavor. It is a fruit of very high quality, and one of the most profitable Apples of its season. Tree productive, fruit remarkably attractive. October and November.

Winthrop Greening.—This is one of the most popular Apples of the Kennebec Valley. Fruit large, roundish, flattened, golden yellow, partially russeted, with red cheek. Flesh tender, crisp, juicy, sprightly and rich in flavor. September to January. Tree not an early, but a good bearer, and becomes very large.

Starkey.—A bountiful annual bearer. Tree vigorous. Fruit medium or larger, oblate, conic, regular, smooth and fair,

yellow well striped with red, flesh white, firm, crisp, juicy, excellent for dessert, being less tart than Gravenstein. November to January.

The list of Maine Pears is short, and they are naturally among the hardest varieties of American origin. Their average merit is very high.

Fulton.—Medium, roundish, cinnamon russet, flesh half buttery, melting, rich, sprightly, agreeable, "nearly or quite first-rate," says THOMAS. The Fulton is in shape much like Sheldon, but far more beautiful in color, being very attractive. The tree is productive and an early bearer, but a weak grower, and best top-worked. November.

Goodale. — "Large, pyriform, handsome, very good," says THOMAS. Tree vigorous and productive. September. A seedling of McLaughlin.

Nickerson.—"Rather large, resembling Louise Bonne de Jersey, very good; tree vigorous, hardy and productive," says THOMAS. September.

Eastern Belle. — "Medium, obovate pyriform, yellow with some russet and red, sweet, rich, musky, very good," says THOMAS. Seedling of McLaughlin. September.

McLaughlin.—Large, pyramidal pyriform, skin rough, partly russeted, greenish, becoming yellow; flesh melting, sweet, rich, perfumed. Early winter. Tree vigorous and productive.

T. H. HOSKINS, M. D., *Newport, Vt.*

MY NEIGHBOR'S PLANTS.

My neighbor across the street had a handsome bay window added to the sunny side of her house last fall, and was immediately siezed with a desire to have that window filled with plants and flowers during the winter. She had little experience with plants, in fact she had always thought them "too much trouble to bother with." But the bay window fired her with a new ambition, and she went to work with great zeal and energy collecting her plants. I gave her a great many slips, and several well rooted plants, she bought a number of a florist, and other friends remembered her so that the shelves and brackets in the bay window were all filled, and the window looked very pretty from the street.

I was away for several weeks, and soon after I came home my neighbor came over to my house and said:—"I do wish you would come over and see my plants. They're not doing a bit well, and I don't know what is the matter with them; I work and fuss over them all the time, but it don't seem to do any good."

I had noticed that the plants seemed in a decline. Some of them had, in fact, quite given up the ghost, and all seemed struggling with a destroyer of some sort."

"Plants never would grow for me," my neighbor continued. "Some folks have a sort of a—a—knack with plants, and they grow for them without the least trouble."

"I don't think so," I said, "plants won't grow for any one, without proper care."

I went over to see her plants, a more enfeebled, dejected and hopeless looking lot of once promising plants I never saw."

"They need water," I said.

"Think so?" she asked. "Well, I used to water them two and three times a day, because I read in a paper that plants needed lots of water. Then I read that they oughten't to be watered oftener than once or twice a week, so I stopped watering them."

"Different plants need different quantities of water," I said.

"Do they?" she said innocently, "I supposed they all needed it alike."

"The soil needs enriching in some of the pots."

"Now do you really think so? Well, I thought so too at first, and I put coffee grounds, and soot water, and fertilizer, and bone dust, and liquid manure, and everything I could hear of on them, but it didn't do any good."

"Did you try them all at once?"

"Oh, no; one day I tried one, and the next day another and so on. I read somewhere that soap suds was good, and I doused them good with that, but I didn't think it helped any. I washed them well with ammonia and water last week, and I am afraid the ammonia was too strong for some of them."

Some one of her dozen or two of fertilizers had evidently been too much for several of the plants, for they were done with this life."

"Another thing," I said, "the soil is packed too tight around the plants."

"I wonder if it is? I used to dig good around them, and loosen up the earth clear to the bottom of the jars every day, but I read somewhere that the earth ought to be kept firm in the jars, so I haven't loosened it up for several weeks."

"Here are some of those little green bugs on this rose Geranium."

"Yes; don't you think that there was an old lady told me once that those little green things were good for plants, if you didn't let them stay on too long."

"I looked at her in blank amazement! "Well, these have been on too long," I said dryly.

"I'm sorry," she said, "I intended setting the plant out the next time it rained, and having them washed off."

"My dear woman," I said, "you would not put out plants in a December rain, would you?"

"I—I—don't know, why not?"

"I told her why not, and asked—Don't you read any good authority on the care of plants?"

"Oh, yes, I read everything, and do everything that I hear of, but after all, I think experience is the best teacher, and one ought to rely mostly on their own judgment in such matters."

That bay window is nearly empty now. There are two or three plucky Geraniums battling bravely for life against mighty odds, but they cannot last long. My neighbor said the other day, that she "never did have any luck with plants." They never "would grow" for her." Do you wonder why? I do not. J. L. H.

THE NEW YORK ORCHID EXHIBITION.

The second annual exhibition of Orchids was given at the Eden Musée, February 16th to 25th, and proved as great a success as the exhibition which the public so enjoyed, last year.

The Orchid, as a decorative flower, is in great demand in fashionable circles; perhaps, because of its costliness as well as on account of its strange beauty. Fashion dictates that bridal bouquets shall consist of these rare blooms, and rooms on festival occasions shall be adorned with them. Does it matter to this exacting goddess if a

single plant is valued at more than a thousand dollars, and that many of the blooms are so delicate that a breath of cold air will chill and shrivel them?

The extreme weather at the opening of the exhibition made the transfer and the arrangement of the plants a difficult matter, yet the room in which they were placed presented a luxuriantly tropical appearance. It is most admirably fitted to such displays, for passing through several entrances, and past the groups of familiar faces, molded in wax, who always seem to welcome you to their

charmed circles, you enter through a passage-way covered with lattice-like greenery into the room. It is well lighted by a glass ceiling, its sides are lined with large mirrors, which reflect the beauty of the flowers and give the beholder the idea that the plants around him and the gaily appareled admirers of them are but a portion of the scene which is continued in several other apartments, until he recognizes his own visage in the glass, and finds but the reflection of himself and his surroundings.

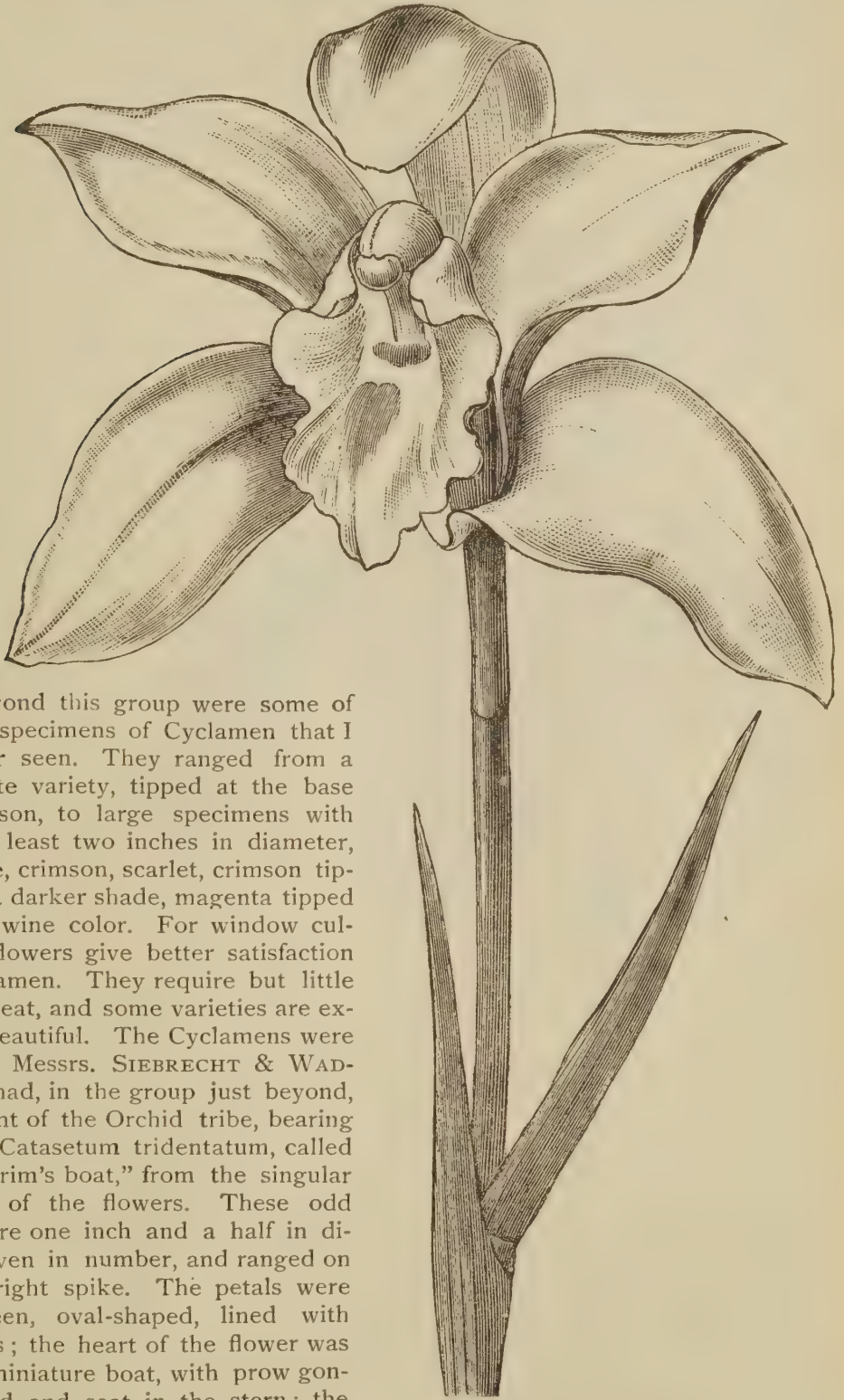


ANTHURIUM ANDREANUM.

Among the prominent exhibitors were Messrs. SIEBRECHT & WADLEY, New York city; W. A. MANDA, of Cambridge Botanical Gardens; ERASTUS CORNING, Albany, N. Y.; W. S. KIMBALL, Rochester, N. Y.; WILLIAM MATTHEWS, Utica, N. Y.; Mr. PITCHER, Short Hills, N. J., and WILLIAM BROWN, Flatbush, N. Y.

The first collection of importance, on the right as you entered the room, was arranged in a bamboo frame-work of Japanese style, with roof of fine matting in odd design; on its front edge perched two little birds, but the orchestra was so continuous with its strains of delightful music that not a note from the birds could be heard, although they seemed in keeping with the fragrance and bloom. Perhaps it was because they had paper tails, though that may be a feature peculiar to birds in bamboo lands. This booth contained Mr. MATTHEWS' collection, and was a fine arrangement of Adiantums with Phalænopsis Schilleriana, mauve color,

and one of pure white. Hanging from the roof was a rare specimen of *Vanda cærulescens*, two shades of blue, the lower petals a deep shade, flowers rather small, but ranged on a spike ten inches in length.

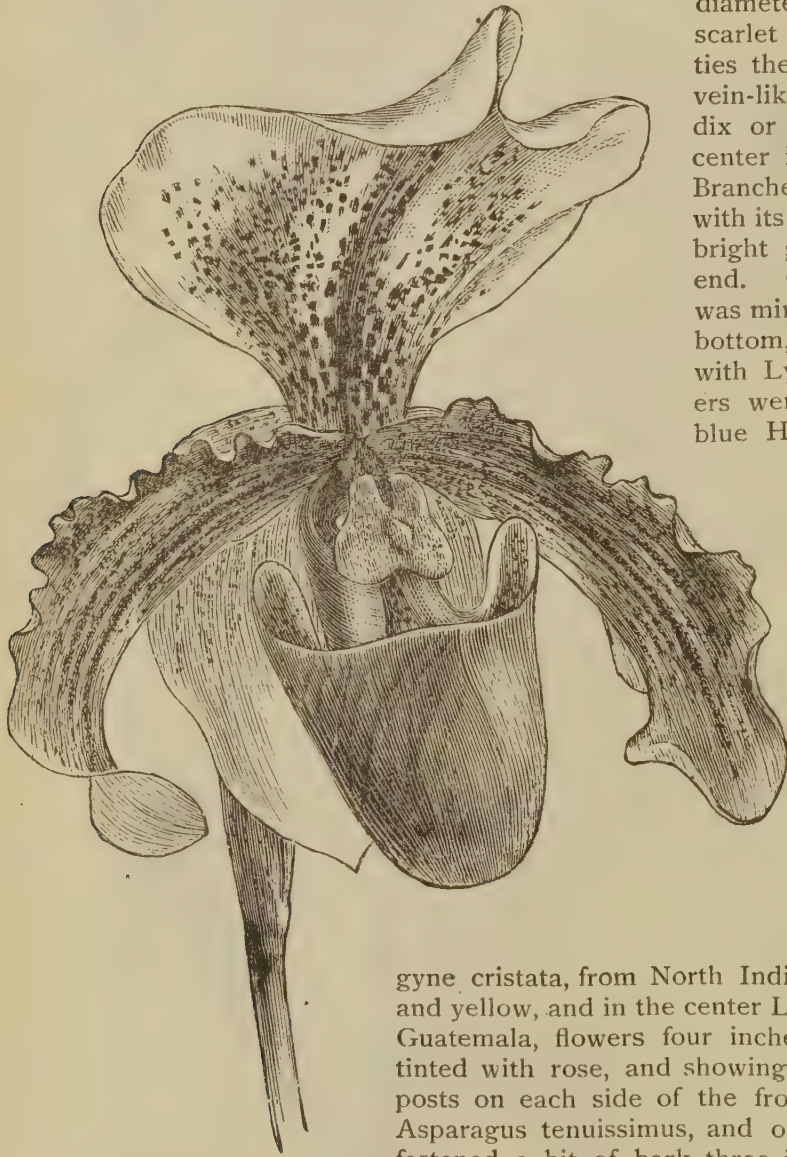


CYMBIDIUM EBURNEUM.

Just beyond this group were some of the finest specimens of *Cyclamen* that I have ever seen. They ranged from a small white variety, tipped at the base with crimson, to large specimens with flowers at least two inches in diameter, pure white, crimson, scarlet, crimson tipped with a darker shade, magenta tipped with deep wine color. For window culture, few flowers give better satisfaction than *Cyclamen*. They require but little care, are neat, and some varieties are exquisitely beautiful. The *Cyclamens* were shown by Messrs. SIEBRECHT & WADLEY, who had, in the group just beyond, a rare plant of the Orchid tribe, bearing the name *Catasetum tridentatum*, called also, "Pilgrim's boat," from the singular formation of the flowers. These odd flowers were one inch and a half in diameter, seven in number, and ranged on a stiff, upright spike. The petals were thick, green, oval-shaped, lined with brown dots; the heart of the flower was a perfect miniature boat, with prow gondola-shaped and seat in the stern; the upper petals folded a little to partially shade the stern of the boat.

The first booth at the left of the room, contained the plants and cut flowers furnished by Mr. PITCHER, of Short Hills, N. J. The frame-work was of light wood,

showing red and gold ornamentations. This booth was about five feet long and three feet deep. At the back was a mossy bank or wall three feet high, formed of sphagnum, which served as a background to the plants; against this, in the center, was draped a long, graceful spray of *Phalænopsis Schilleriana*, with its profusion of mauve colored bloom, on each side of this was *Phalænopsis amabilis*, with pure white flowers, and on either side of these a brilliant *Anthurium*, or, as it is sometimes called "Flamingo plant," its flower spathes are heart-shaped, three inches in



CYPRIPEDIUM LEEANUM.

Organ Mountains. Its name is *Sophronitis grandiflora*, from *sophronea*, modest; the blossom was large for such a tiny plant, being nearly one inch in diameter, round in form, and having rather thick petals of deep red.

At the lower end, on this side, WILLIAM BROWN, of Flatbush, N. Y., had a very artistic booth, rustic sides of forked sticks, with dark canvass covering stretched tent fashion across the top. *Cattleyas* were in the center, also a very fine spike of *Dendrobium thyrsoflorum*, golden yellow and white, resembling somewhat Horse Chestnut blossoms. Large branches of Southern Pine were at each side of the booth. *Cattleya Trianae* blooms very good, *Phaius maculatus*, from East Indies, had an upright stalk with many yellow flowers ranged about it in a spike six inches long. In this collection there were also *Epidendrum elongatum*, with small pink

diameter, and of a bright scarlet color; in some varieties the surface shows deep vein-like forms, and the spadix or fleshy spike in the center is of the same color. Branches of Southern Pine, with its long needle leaves of bright green, filled in each end. *Cyperus alternifolius* was mingled with it. On the bottom, which was covered with *Lycopodium*, cut flowers were arranged in dark blue Hyacinth glasses, one

or two specimen blooms in a glass. *Cymbidium eburneum*, with large, ivory-white flowers, was very attractive. This species is said to be deliciously fragrant. There were also choice specimens of *Cattleya speciosissima* and *Angraecum Leonis*, the latter a fine species from Africa; also, *Cælogyne*

cristata, from North India, with flowers white and yellow, and in the center *Lycaste Skinneri*, from Guatemala, flowers four inches in diameter, white tinted with rose, and showing a crimson lip. The posts on each side of the front were wound with *Asparagus tenuissimus*, and on the right one was fastened a bit of bark three inches long, on which was growing a minute species of Orchid from the

flowers; *Angræcum sesquipedale*, three branching petals two inches long, then three others between, all waxy white; *Calanthe Veitchii*, pink flowers; *Cypripedium barbatum*, slipper green and dark red; *Cypripedium Harrisianum*, upper and lower petal tipped with pure white; *Cypripedium insigne Maulei*, a pale brown or fawn color, upper petal tipped with pure white, and *Masdevallia Tovarensis*, pure white.

Through the center of the room were two long tiers of plants with a tall Palm at the head, and fruited Cocconut Palms at the lower end. In front of these trees was a Fern Palm with a fine *Dendrobium* hanging from its branches. Beneath this Palm was a magnificent *Azalea*, variegated pink, semi-double, head three feet in diameter, with abundance of bloom. On the Palm which headed the second tier was a very peculiar inflorescence that seemed a part of the tree until searching eyes discovered the bottle which held the stem. This strange, greenish-white spike, sixteen or eighteen inches long, was said to be the fruit of the *Araucaria*.

In the center of the right hand tier was a fine Palm, with a large Stag's Horn Fern at its base; on each side was *Phaius grandifolius*, with tall spike of yellow, bell-like flowers. The foliage of Palms at the ends met the one in the center, and below, on both sides of the tier, many fine plants were grouped. At the front was the collection of ERASTUS CORNING. In it was *Lælia bella*, a hybrid Orchid, small, but valued at over \$1,000; *Catasetum gnomus*, showing a green "boat" in deep brown petals, which, by contrast, made it stand out clear and distinct; *Brasavola glauca*, *Lycaste Skinneri*, *Cymbidium giganteum*, *Lycaste campas*, *Lycaste gigantea*, the latter with bud just ready to burst, the bloom a waxy cream white.

On the side of this right bank, or tier, was *Vanda gigantea*, deep yellow, and the famous *Cypripedium Morgani*, valued at not less than \$1,000; large slippers of light brown color striped with dark brown.

The prominent collection on the second tier was that of WILLIAM S. KIMBALL, of Rochester, N. Y., who showed *Masdevallia ignea*, a magnificent Orchid with flowers of a glowing crimson; *Odonoglossum grande*, three branching petals of deep brown tipped with yellow; *Cy-*

pripedium Leeanum superbum, white, incurved petal dotted with brown, with pale brown slipper; an exquisite flower.

There were also in this tier fine blooms of *Cattleya Trianae*, Siebrecht var., four inches in diameter, a very pale mauve color with deep crimson blotch on lower petal; and *Cattleya Trianae alba*, pure white.

In front of the orchestra was a six foot glass case, holding some stove foliage plants which required to be kept moist. Standing on a pedestal was *Cephalotus follicularis*, a most curious little plant with two mouths, ready to devour intrusive spectators, but the glass case prevented any manifestation of its cannibalistic habits, and it looked innocent.

In his paper on the Progress of Orchid Culture in America, Mr. BEARD says, that Orchids, in their native habitats, grow on stems and branches of trees, not as parasites, but drawing sustenance from the surrounding air and moisture, the roots taking some slight nourishment from the vegetable deposits which accumulate upon trees in the tropics, where decay is rapid. The finest Orchids are often found on tops of the highest trees, shaded by foliage amid which they grow, and they are obtained with great difficulty. He further says, "that while the Orchid forms vast quantities of seed, which germinate freely in its native home, the process of raising Orchids from seed in our own glass houses is uncertain, tedious, and requires great skill. The sowing is a delicate process, the seed being as fine as dust. *Dendrobiums* have been flowered in from three to four years from the date of sowing seed, which is the shortest period of germination and growth known. *Masdevallias* occupy from five to six years before they are strong enough to flower. The majority of Orchids occupy longer even than this, while *Cattleyas* and *Lælias* are from ten to fourteen years in germinating and reaching the flowering state, and examples when nineteen years have been consumed are recorded. A large proportion of seed sown never germinates under glass, notwithstanding the greatest care is exercised, thus the opportunities for the cultivation of Orchids from seed are surrounded by almost insurmountable difficulties, except to those who have exceptional skill and patience and are willing to wait half a lifetime for results."

S. FRASER.

ORNAMENTAL VINES.

Nothing adds more to the appearance of a place than vines growing about the house. If poetry in growing things belongs to one class of plants more than to another, it must be that vines are the poets of the field and garden. I have seen houses, that were as ungraceful in their bare outlines as they could well be, so transformed by the use of vines about them, that you forget all about their former ugliness. That was hidden under the clustering leaves; the slender branches, thrown here and there in the careless, unstudied grace of the true artist, breaking up all harsh outlines, and destroying all of that primness and formality characteristic of a house as it comes from the hand of the carpenter. Skilful planning by a designer with an artistic eye can do much for a home, but the vine can do more. The finishing touch must be made by it. It is not only a poet but it is an artist. It can not only conceal defects, but it is capable of making them picturesque and striking when given a chance to do so. I was very forcibly impressed with the truth of this by seeing a house not long ago, which had been left in an unfinished state. The cornice had not been put on, and some of the roof-boards projected a foot or more beyond others. This condition of incompleteness, left bare, would have made the house an unpleasant thing to see. But some one had planted vines about it, and they had clambered to the roof, and run along the projecting boards of the ends, covering them with foliage, and dropping here and there a festoon of greenery which actually made the building more attractive than it would have been if the cornice had been completed, with its straight lines and uncompromising angles. Do you want something to clamber up to the roof, and cover the building with foliage, beautiful all through the season, but doubly so in the fall? Then the very plant you are in search of is our native *Ampelopsis* or Virginia Creeper. This vine is to us what the Ivy is to England. It is hardy; it will fasten itself to the smoothest surface; it will take care of itself. What more can you ask; In fall it will take on colors so brilliant that it rivals the flowers in the beds below. After the leaves have fallen a new beauty

is disclosed in the great clusters of purple-black berries, borne on crimson stems. It will grow so rapidly that a house is covered with it almost before you know it.

Do you want something of more delicate growth to plant about the porch or veranda: Then get a Honeysuckle, or better, two of them. Plant *Halleana*, white, along with Scarlet Trumpet, and let the flowers of the two mingle together. You will have a fine contrast of color, and they will give you blossoms most of the season. Or, plant two varieties of *Clematis*; *Jackmanii*, violet-purple, with flowers four inches across, with our native *Virginiana*, or *Virgin's Bower*, with feathery white blossoms. The contrast in habit and shape of flowers is quite as striking as that of color. One brings out the peculiarity and beauty of the other with strong effect, and enhances it. Or, instead of *Virginiana*, use *Flammula*, with flowers much like those of the native variety, but more fragrant.

For training up a tree on the lawn, nothing is better than *Celastrus scandens*, or Climbing Bittersweet. It has bright, beautiful foliage, always clean and free from worms or insects, and bears immense crops of berries, of a bright coral, inclosed in three parted shells of orange, which burst and disclose the fruit within. It is a rapid grower. It twines about whatever it comes in contact with, and needs no trellis or other support if you plant it near a tree. Once let a branch get a grip on a tree, and it will take care of itself after that. It is one of those vines which are spoiled by training on a trellis. To display its beauty well it must be allowed to exercise its own taste in regard to the disposition of its branches. Left to follow out its own ideas of what is artistic, it will never violate the rules of true art by lapsing into primness.

Aristolochia or Dutchman's Pipe, so called from the peculiar shape of its flowers, has immense foliage, and as it grows rapidly, it is well adapted for places where a thick screen is desired. The leaves overlap each other, and will cover a summer-house with shingles of "living green."

Where proper care is given them, nothing can be finer for use about the veranda, for training to its pillars, than the climbing Roses. The best varieties, in my

opinion, are Boursault, intense crimson, and Russell's Cottage, also crimson, but with a more velvety texture of petal than the first named one. But these will not do well at the north, unless laid down and covered in winter, and if you are not willing to give them this attention I would not advise you to attempt their culture. The foliage is often ruined by slugs and the aphids, but if it is sprinkled well, all over, with water, and Slug Shot is sifted on, early in the season, without waiting for these pests to put in appearance, it is

an easy matter to keep them clean. In putting on any powder or infusion it is necessary that the underside of the leaves should be got at, for there is where the insects "most do congregate." The thorns on old stalks make them somewhat formidable, but you can "handle them with gloves." In laying down always heap earth around the base, over which, with care, the stiff stalks can be bent without breaking. If bent sharply they are often injured.

EBEN E. REXFORD.

WATERSIDE GARDENING.

Few situations can rival the brookside in offering opportunity for a choice display of plants. As it is somewhat rare to find such a situation upon the home grounds, there is more reason that where it exists it should be made the most of. The grounds bordering a spring, rill, or lakelet set with those plants and shrubs natural to wet places may be made to produce some of the most charming garden effects.

Quite a number of the hardy plants of our gardens thrive exceptionally well, providing they are drawn in somewhat from the water's edge. Among such are the Day Lilies (*Hemerocallis*), Canadense and superbum Lilies, Campanulas, Forget-me-nots, *Spiræas*, Phloxes, the Golden-spurred Honeysuckle, many of the Irises, the Eulalias and other ornamental grasses.

We are by no means obliged to look to cultivated plants entirely for material, indeed, the whole may be arranged with native plant, and by judicious selection made attractive the whole season. The common Blue Flag and other native Irises, *Lobelia cardinalis*, and the Blue Cardinal Flower, (*Lobelia syphilitica*), Fringed Orchises, (*Habenarias*), the Arrow Head, (*Sagittaria purpurea*), the Cat Tail, (*Typha latifolia*), and, in fact, any wild plants of pleasing appearance to be found in wet soil, could be utilized with good effect.

Perhaps the very height of good effects are reached by combining both hardy plants of our gardens, the wild ones of our woods, and going still further by bringing moisture-loving plants from the greenhouse during the summer. Palms,

Orange trees, Oleanders, and all these may be used, concealing the tubs when placed among those planted permanently.

Then there are the *Caladiums* and *Cannas* which may be planted out for the season, but it is best to defer bringing these out until warm weather is a settled question, but giving them a good start under glass in pots, so that they are quite well advanced when planted.

In planting the waterside garden with mixed plants, wild and cultivated, it is best to locate those gathered from the woods, etc., next to the water, following with the hardy cultivated flowers, while the subjects introduced from the conservatory may be interspersed among the others in such a way as to effectually conceal the vessels which hold them.

On the part of the planter, constant watchfulness should be exercised that none of the stiff, formal masses, so conspicuous in the bedding system, are made. All arrangements should be modeled after nature, as much as possible, planting in little colonies, which are much easier cared for than when scattered.

Sometimes it may be desirable to plant both sides of a stream, and, in this event, the effect may be greatly enhanced by encouraging different types of vegetation on either side.

As a rule, a rich, black soil, largely composed of vegetable matter, surrounds places to be devoted to waterside planting, and where this occurs, but little preparation is needed in order to properly fit the ground. But where a preparation is necessary, I would commend a course to be taken as for any flower bed,

namely: working in well decomposed cow manure and rich soil to the depth of a foot, at least.

Where good strong plants are set, both of cultivated ones and those taken from their native haunts, it is seldom that

trouble is experienced in their care after the first year, when the grass may be allowed to grow along with them, but it should be kept in check until there is no danger of the plants being choked out.

FISKE.

THE OKRA, OR GOMBO.

The Okra or Gombo, *Hibiscus esculentus*, is a vigorous growing annual introduced from the West Indies. It is cultivated for its large green seed pods which are used in soups, stews, etc., and by some they are stewed, and served as Asparagus. In the southern states, it is highly esteemed, and considered a very wholesome and nutritious vegetable, while at the north its cultivation is fast increasing, and no garden can be considered complete without it. As the Okra is of Tropical origin, and requires a warm temperature, there is nothing to be gained in planting it until settled warm weather arrives.

In order to ensure a satisfactory crop, Okra should be given a deep, well enriched soil, one that has been heavily manured for a previous crop being preferred. But if this cannot be given, a piece of ground can be properly prepared for it, and marked out in rows three feet apart. In these rows or drills the seed can be sown, rather thickly, as in the event of wet weather it is liable to rot. Cover to the depth of an inch and when up, thin out so that the plants stand twelve inches apart. Keep the ground mellow and well cultivated, and at each hoeing, draw up a little earth around the plants.

If it is desirable to procure Okra very early, the plants should be started under glass. For this purpose the seed should be sown about the first of April, in a shal-

low box filled with turfy loam. Sow thinly, cover slightly, and place the box in any warm sunny situation. As soon as the plants are up, very gradually expose to the open air, and plant out when all danger of frost is over, in rows three feet apart, the plants standing ten inches apart in the row, being careful to select cloudy or wet weather for the operation. Where Okra is in demand, it is advisable to start a part of the crop under glass in order to lengthen the season's supply.

It may be well to mention that the green pods are suitable for use, when about one inch and a half in length, and that they may be preserved for winter use by cutting in halves and drying in a manner similar to apples. Some claim that the ripe seed forms an excellent substitute for coffee, but I consider it worthless for that purpose.

There are several varieties of Okra described in the catalogues of our seedsmen, but I can see but little difference between them. In fact, the only two distinct varieties I know of, are the Dwarf or Dwarf Green, with short smooth pods, and growing three or four feet in height, and the Tall or Long Green, which attains a height of five or six feet, and bears long ribbed pods.

An ounce of seed will sow about one hundred feet of row, and in sowing seed let it be selected from the most perfect pods, on the most productive plants.

CHAS. E. PARNELL.



FOREIGN NOTES.

SUB-TROPICAL PLANTS.

There is so much of practical value in the following notes on sub-tropical plants, by E. MOLYNEUX, which appeared in a late number of the *Journal of Horticulture*, that we give it in full, considering the information and suggestions in regard to the treatment of these plants quite as applicable to them in this country as in England. The taste for sub-tropical plants appears to be a growing one, and this phase of ornamental gardening is much more effective than that of the more elaborate system of bedding with all low-growing plants, though that has its uses, and the skillful gardener, while he will not abandon himself to a system, will take the good from all methods, and apply it appropriately.

Where opportunities exist for the favorable cultivation of sub-tropical plants during the summer and autumn a most agreeable aspect is imparted to gardens. A position well sheltered from southwesterly winds should be chosen, as much disfigurement may be caused to the leaves of many plants by strong gales of wind during the early part of September, and just at a time when the plants are expected to be in full beauty. If possible, the position should also be secure from northeast winds in the spring when the plants are first placed in the beds, as a serious check is sometimes given from which they take a long time to recover. A position sheltered from these winds, yet open to the south to receive the sun freely, is best suited to the requirements of sub-tropical plants. A few notes on the best varieties, method of growth, and a few styles of arrangements may be of service to intending planters, although the latter is a matter to be decided according to local circumstances and individual taste.

Acacia lophantha.—This plant, distinguished by its elegant leaves, grows in one season from two to three feet high with one straight stem and numerous side branches. Toward the end of the winter months sow the seeds singly in small pots of sandy peat soil, plunge the pots in a gentle bottom heat until the seedlings appear above the soil, then transfer them into larger pots. Grow the plants close to the glass, and gradually harden them before planting out. As "dot" plants in carpet bedding this *Acacia* answers well, or planted in a mass in a bed, carpeting the soil beneath them with *Perilla Nankinensis* in a small state, which must be kept pinched and dwarf. They may also be used with good effect in mixed beds of various sub-tropical plants, as the plants can be kept in shape if necessary by pinching out the points of the shoots.

Abutilon Thompsonianum variegatum.—When grown with a single straight stem this is a capital "dot" plant. It is also good in a mass at such a distance apart that the leaves nearly touch. A carpet of *Agatheæ cœlestis* (Blue Marguerite) beneath makes

a suitable groundwork. When good soil is used the plants make vigorous growth, and the golden marble-like markings of the leaves come out boldly. Short cuttings inserted several in a pot during September in a gentle bottom heat make good plants if potted separately during February and grown in a cool house. Tops from stock plants may be inserted at the present time and quickly root. In any form the plants should not have the points of the shoots taken out, but be grown with one straight stem. All lateral growths must be removed during the summer or pinched to one eye as best suits the position the plants occupy.

Cannas.—These are well adapted for the sub-tropical garden. They vary so much, both in height and color, that they may be used in many positions with good effect. There are many varieties, some having dark coppery leaves, while others are green, and many also bear handsome flowers. To obtain a good effect they are best planted in a mass. Their preparation in spring is simple. The roots may be wintered in the Mushroom house or cellar, keeping them moderately dry, and about the middle of March divide the roots if large. Place them in boxes or in pots, using any moderately good soil, arranging the roots in a cool house where growth will be steady, and not in any way drawn up weakly. From the boxes the plants are easily transferred to the beds without a check. While in pots the roots are liable to become matted around the sides. *C. zebrina*, *C. Annei*, *C. aurantiaca*, *C. Warscewiczii*, and *C. gigantea major* are good varieties.

Centaurea gymnocarpa.—The narrow silvery foliage of this *Centaurea* well suits for planting beneath the dark-leaved Castor Oil plants, or as edgings to beds with similar colored leaves. The easiest way to secure a stock of plants is by sowing the seed in a gentle hot-bed at the end of February, or early in March. Pot the plants as soon as ready, growing them on in a temperature of not less than 60° as near the glass as possible to prevent their drawing up weakly, hardening them off thoroughly previous to planting out.

Chamaepeuce diacantha and *Casabonæ* (Fish-bone Thistles).—The former has white foliage with long spines, the latter green foliage, shorter, and small brown spines. For "dot" plants either is adapted when arranged with suitable colors—as, for instance, the white variety planted amongst *Herniaria* or red *Alternantheras*, and the green sort with any white or yellow bedder of dwarf habit. Either makes a good edging to many kinds of foliage beds. Sufficient space should be allowed between the plants to allow a proper development of the leaves. Planted alternately both varieties have a good effect. By treating them in the same way as advised for the *Centaurea* capital plants are easily obtained.

Grevillea robusta.—An excellent plant, having Fern-like foliage, capitally suited for the flower garden, either as a "dot" plant or associating with others. Perhaps the former manner of planting this *Grevillea* is most suitable to its evenly balanced foliage when employed for bedding purposes. Seedling plants at the end of the first year will be from one to two feet high, and may be lifted from the beds early in October. Potted and wintered in a cool house, without the loss of their leaves, such plants are useful

for other purposes in the next season. The seed should be sown early in the year in a brisk bottom heat, as they take a long time to germinate. Pot the plants as soon as they are large enough, adding some peat to sandy soil, and grow them in a melon house or vinery where a brisk heat is maintained until they reach a good size, afterwards harden them gradually.

Humea elegans.—Where these succeed they are generally much appreciated; their long drooping spikes of graceful flowers, plume-like, are handsome. Planted singly they are the most attractive. In many places directly the plants are placed in the beds they die in a most unaccountable manner, which is very disappointing. Sow the seed in sandy soil in a cold frame in June, shading from bright sun, potting them as required until seven-inch or even larger pots are used. A position in the cool greenhouse during the winter suits them best.

Perilla Nankinensis.—This and other varieties are useful where a little dark bronze color is required. The plants can be kept dwarf, or they can be had two feet high, and for planting in mixed beds very useful. It is not wise to grow the plants too large before planting, as the bottom leaves are liable to fall if a check is given them either by cold or dryness at the roots. The middle of March will be early enough to sow the seed, placing the pots in a moist warm atmosphere, pricking the seedlings into boxes as soon as large enough; by this means a sturdy dwarf habit is maintained.

Ricinus Africanus and *Gibsoni*.—Two of the best Castor Oil plants; the latter, with dark foliage, usually grows from three to six feet high, according to the treatment it receives. It is the most commonly used, adapting itself to a variety of purposes, such as singly or mixing with other foliage or flowering subjects, such as dotting here and there among scarlet *Pelargoniums*. The green variety is much more robust. I have seen plants grow eight feet high in one season, which had a noble effect, the immense green leaves and red stems contrasting well with the surroundings. Early in March sow the seeds singly in small pots, as from these the plants are more easily transferred to larger ones without check than when several are in a pot.

Cannabis gigantea.—The Giant Hemp is not often seen except in favorable positions, such as near water in low situations, where it grows to a height of twelve feet in a season. The leaves are deeply serrated and of a pleasing green tint. The plants should only be small when planted out, as they run up quickly, and if very tall growth is not wished, early in April is soon enough to sow the seed.

Solanum marginatum, *robustum*, and *pyracanthum*.—Useful plants for the sub-tropical garden. The former grows vigorously, but may be kept to a height of two to three feet by pinching the points of each shoot. A row next to *Ricinus Gibsoni* has a good effect. *S. robustum* has much larger green leaves and requires more space, but is effective. The last named makes an excellent "dot" plant surrounded by low-growing plants. Its narrow drooping leaves, with long brown spines, are very graceful in appearance. Sow the seeds early in March in a brisk bottom heat.

Wigandias.—These possess noble foliage, and where space can be given them a fine effect may be had. Sow seed at once, in a similar manner to that required by the *Solanums*.

Casuarina Sumatrana.—A plant with drooping feathery foliage, useful for the summer garden either in small or tall plants. Planted singly it shows to advantage. A stock of plants may be raised by

means of seed sown in February or by cuttings inserted in April in a cool house.

Dracaena indivisa.—Either in a small or large state this is most useful for the summer garden. Planted singly in a carpet of red *Alternanthera*, *Antennaria*, or any other low-growing plant, it is very elegant.

Eulalia Japonica variegata.—One of the best "dot" plants we have. A stock is easily obtained by dividing an old stool in the spring, starting them in a gentle heat, after which a cool temperature suits them best.

Ficus elastica.—This should be planted in a mass to be effective. If a purple or blue *Viola* be used to carpet the bed between the plants a good effect is obtained. Where an old stock plant exists, cuttings from six inches to one foot in length strike readily if placed singly in pots filled with sandy soil and plunged in a brisk bottom heat. A stake should be placed to each cutting to prevent their becoming loose in the soil occasioned by their weight.

Ferrula communis.—With its flat Fennel-like leaves this is very effective when the plants are of medium size, especially near the margin of a bed or on the edge of a pond. Seeds sown early in March in a gentle hot-bed quickly yield plants that soon reach a suitable size for planting.

Melanthus major.—Notable for its glaucous green foliage, planted singly and restricted to a single stem is a very showy plant, but is not often seen. Seed can be sown in the spring, or suckers can be taken from the base of an old plant with roots attached, and these quickly grow into a useful size.

Phormium tenax variegatum and *P. Colensoi*.—The *Phormiums* are perfectly hardy in the south of England, are easily increased by division of the roots, and are well adapted for planting in a mixed bed as they are to stand, singly either on the grass, or in the center of a bed containing low-growing plants.

Agave Americana variegata.—This is often used in the summer for the sub-tropical garden, carpet beds, or the rock garden. Anywhere placed singly it is effective. Offsets which spring from the base of plants quickly grow into a serviceable size. If the pots are simply plunged during the summer where needed they are much more easily housed in the autumn in a cool greenhouse.

Zea Japonica variegata.—Much valued for its silvery-like foliage, which is heavily striped with green. Seeds sown singly in small pots in a gentle heat about the middle of March quickly germinate, and the plants grow to a good size if transferred to larger pots, using rather poor soil.

Eucalyptus globulus is much liked by some persons for the fragrance of its leaves and for its blue color. Seeds sown in February in bottom heat yield useful plants if not allowed to become drawn by overcrowding. In a mass by itself or mixed with other plants, allowing room for a free development of its branches, it is a capital plant for sub-tropical gardens.

Funkia Sieboldi makes a capital edging to other taller-growing plants of a dark or deep green color. It is perfectly hardy anywhere. Division of the roots is a ready way to increase the stock.

HYACINTHS IN BOUQUETS.

French florists make bouquets of Hyacinths by mounting each flower singly on a wire, and thus arranging the flowers of different colors with sprigs of *Adiantum*, or some other appropriate green.

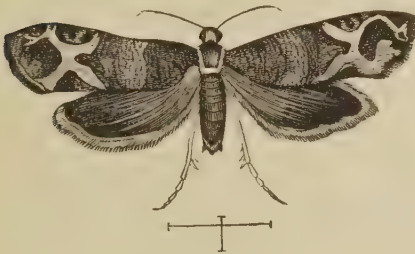
PLEASANT GOSSIP.

GRAPE-BERRY MOTH.

I wish to ask your advice concerning my Concord Grape vine, eight or ten years old, which bore good fruit, and large quantities, until within two or three years. Since that time, each season, a small black or dark colored worm pierces its way into the fruit between the Grapes. It enters the berry at the point where the berries touch, and where the bunches are straggling and berries do not touch there are no worms, but, last season, my Grapes were nearly all damaged in this way. The worm is about one-quarter of an inch in length. What shall I do to prevent this?

J. F., Chester, Pa.

It is probable that the worm described is the larva of the Grape-berry Moth, *Eudemis botrana* (SCHIFF). It is an imported species of insect, according to SAUNDERS, and is described in his *Insects Injurious to Fruits*, from which the accompanying illustrations have been taken. The infested Grapes are usually



GRAPE-BERRY MOTH,
ENLARGED.



DAMAGED BERRIES,
WITH LARVA.

perceived late in July, by a discolored spot where the worm has entered. The larva is of a whitish-green color; if the contents of one berry are not enough to satisfy it, it draws two or three together by means of silk threads or web, and then passes from one to another. As it approaches maturity it becomes darker in color, with a black head, and body of yellowish-green, and is then about one-fourth of an inch in length.

When the larva is full grown it cuts an oval flap from the leaf and turns it back and fastens it over itself, forming an enclosure, which it lines with silk, where it remains until it has passed the chrysalis state.

The perfect insect is here shown enlarged, the diagram underneath indicat-

ing the full size. The body of the insect is greenish-brown, the fore wings a dull bluish shade with dark brown bands and spots, and the hind wings a dull brown. It is said there are two broods in a season.

As it is probable that most of the last brood pass the winter attached to the leaves, Mr. SAUNDERS suggests that if these were gathered and burned a large number of the insects would perish, and the infested Grapes might also be gathered and destroyed. The insect, he says, is attacked by a small parasite, which doubtless does its part toward keeping the enemy in subjection.

WINTER-BLOOMING BEGONIAS.

I would like to have you answer, through your MAGAZINE, what treatment to give Begonias to have them bloom handsomely in winter. What kind of soil do they require, must they have more heat than Geraniums, and what are the best winter bloomers?

S. L. H., Smithtown Branch, N. Y.

A soil composed of one part sand, one part old manure, and two parts half rotted sods is well adapted to Begonias. Plants which have bloomed during the winter can be plunged in summer in the ground over the rims of their pots, where they will make a fine growth and be ready for blooming in winter; they should have their tops shortened before plunging them out. Young plants can be turned out of their pots into the open border early in summer, where they will make a good growth and plenty of roots. Both the young and the old plants can be lifted early in September, and be repotted in soil such as already described. Afterwards place them in a cold-frame to remain for a time, or remove them to the house. The conditions of temperature adapted to the Geranium will also suit the Begonia. Some of the best winter-blooming varieties are *B. argyrostigma picta*, *B. fuchsioides*, *B. hybrida multiflora*, *B. grandiflora rosea*, *B. incarnata*, *B. Massiliensis* and *B. Sandersonii*.

GARDEN QUERIES.

Your MAGAZINE has been a source of information for the last ten years, but still I am in trouble once more, and come to you for help.

1. What can be the cause of my Pomegranate not flowering, it is a strong, healthy plant, over five years in my keeping, grows nicely every year, but no flowers.

2. I have two *Amaryllis robusta*, strong bulbs. What is the proper way to care for them, as they never lose their leaves all the year round; is the treatment any different from the others?

3. Can you let me know something more particular about the Dahlia worm, as mentioned in the MAGAZINE of 1886, pages 153 and 186. By the way of illustration, scientific name, what does it originate from, a butterfly or bug, etc.? so that we may know it by more than one way. I had from one to three of worms in all of my Dahlias, last summer, so, with worms and the dry weather, my Dahlias went to ruin.

4. Are there some of the Dahlias which will support themselves, or are they all, as I always have them, long, straggling stems that cannot carry their own weight?
Y., Chicago, Ill.

Allowing the roots of the Pomegranate to become cramped, or pinching in the ends of the green new growth will tend to produce flower buds.

The *Amaryllis* mentioned should be watered very sparingly during the winter season, giving only enough water to



GORTYNA NITELA—NATURAL SIZE.

maintain a little moisture; water once a week might be often enough. At the same time it should stand in a good light. As growth starts in spring water can be given more freely.

In regard to the Dahlia worm inquired about, Professor WILLIAM SAUNDERS, of the Canadian Department of Agriculture, says: "It is altogether probable that the borer is one of the moths belonging to the genus *Gortyna*, and may be *Gortyna nitela*, mentioned as the Stalk-borer in my work on *Insects Injurious to Fruits*" The work referred to says: "This larva which is commonly found in the stalks of the Potato and Tomato, may be said to have a rather varied taste, as it also bores into the stalks of the Dahlia, Aster and Cocklebur, the cob of the Indian Corn, and the fruit of the Strawberry. When

it leaves the fruit or other substance it has occupied, it descends a little below the surface of the earth, and in a few days changes to a brown chrysalis, from which this moth emerges from about the end of



LARVA OF GORTYNA NITELA.

August to the middle of September. In case this insect should so multiply as to require a remedy, hand-picking is the only one suggested."

The Dwarf Dahlias have short, stout stems and need no stake for support.

INCH PLANT—IVY POISON.

The Inch Plant, inquired about in the April MAGAZINE is, doubtless, the common *Tradescantia*, often also called California Ivy, California Myrtle, Wandering Jew, and various other names.

Cure for poisoning by Poison Ivy: Take a small handful of leaves of common Sweet Fern, *Comptonia*, fresh ones are best, and pour over them a pint of cold water. Let it simmer to half a pint, and bathe the afflicted parts. This will keep a long time in a tightly corked bottle.

OLD SUBSCRIBER.

The *Pseudo-Polygonella*, or Jointweed, is probably the Inch Plant inquired about in last MAGAZINE. H.

We fear that A Subscriber, who inquired on page 113 about the Inch Plant, will not be greatly enlightened by the names given above. What are these plants? No dependence can be placed on common names. What are the botanical names of the plants? Wandering Jew is a name applied to *Saxifraga sarmientosa*, and we never knew of any species of *Tradescantia* being so called. Which species of *Tradescantia* is meant by "common" *Tradescantia*?

By *Pseudo-Polygonella* is probably intended *Polygonum articulatum*.

HELIOTROPE AS A HOUSE PLANT.

E. McC., of Newcastle, Pa., in the March number of the MAGAZINE, inquires for experience in keeping *Heliotrope* plants over winter. I bury the pots to the rim in the flower bed for summer, and before frost lift the pots and then give the same care as other plants. My plants have bloomed all winter; no blight.

MRS. R. A. S., Springfield, Ohio.

PLANT CULTURE IN A MINNESOTA WINTER.

I know many of you who live in lower latitudes are apt to think of Minnesota as having a temperature like that of the North Pole, and I do not see much in floral publications about plant-growing in this state, so, perhaps, our eastern friends do not realize that in spite of 40° below zero sometimes, we succeed admirably with house plants.

I have not had a single house plant frosted this winter, in a collection of nearly two hundred, among them a large variety of *Coleus*, and now, March 6, I have quantities of blossoms, and have never been without them during the winter—could pick a bouquet any time.

Our house is heated with a coal furnace, and I have never seen plants do better any where, in spite of the theory of some, that coal gas is death to plants. Some of my friends, who have seen plants frozen stiff in other houses this winter, say that any plants but mine would die with the frost probably quarter of an inch thick, sometimes, on the conservatory windows. Well, perhaps the plants and I do have an understanding about the matter, for I spend a good deal of time with them, and do a good deal of hard work, and they do show their appreciation of the care bestowed, and I believe that any one who has a real love for them, will be successful in their culture.

Ladies say to me many times "oh your plants are so beautiful; how I wish I could have such, but they will not grow that way for me; what do you do to make them grow so." In the first place I love them and take real pleasure in the care of them, although it is really hard work. I am careful in getting the soil for potting plants—going to the woods for leaf mould, and using about one-fourth with three-fourths good garden soil, that has been enriched from time to time. I heat the earth to kill any worms, then put pieces of charcoal in the bottom of all the cans—for I use those for all *Geraniums*, and any plant that does not require more than a quart of earth, painting them some dull color, either black or the color of a clay flower-pot. I have fancied of late years that the tin gets warmer in the sun, and so the roots get more heat, at any rate they do splen-

didly and the things do not get broken, and cost nothing. Then I move my plants indoors two weeks before it is cold enough to start fires, as the change is less for them, and they never seem to mind it, but go on growing as fast as they can. But in mid-winter I have trouble with green fly and mealy worm, but never red spider, as I shower my plants very often with a little tin pump that I set in a pail of water, and which throws a fine spray all over the conservatory. I keep insect powder, and tobacco, for the green fly, sometimes throwing the powder over the plants with a little bellows, and sometimes washing them with a decoction of tobacco. For mealy bug, I have fir-tree oil, gotten from a florist. Dilute it in water, 16 parts to one of oil, and apply with a small brush, then keep close watch for their reappearance, and go over them again so they can do no harm. It is a continual warfare; it pays, however.

I never know where to stop when I am upon the subject of flowers, and would like now to make many suggestions to flower-loving readers, about some plants that are easily raised from seed that we usually think we must buy from florists, but will leave that for the present.

I will only add a list of the plants I have now in bloom, all under the same treatment, except that the *Begonias* have a shady corner of the conservatory. *Euphorbia Jacquiniflora* has been in bloom over two months, *Salvia splendens* in bloom nearly all winter, a large variety of *Geraniums*, *Callas*, *Abutilons*, *Wall-flowers* grown from seed last summer, are beautiful and fragrant, *Petunias* in variety, *Red and Yellow Oxalis*, *Verbenas*, *Alyssum*, *Lobelia*, variety of *Begonias*, *Achania Malvaviscus*, a large *Coral Cactus* full of its white blossoms, three colors of *Thunbergia*, which have bloomed freely all winter—*Mignonette*, and my *Cobea* vine, *Heliotrope*, and white *Ageratum* are in bud. I have a great number of other kinds of plants that are growing well, but not in blossom at present. So much for what can be grown successfully in the cold northwest, and much more could easily be told in evidence of our ability thus to beautify our homes.

MRS. H. J. G. C.

PARIS AND LONDON FLORAL FLASHES.

The winter is considered over in London with the coming of Hyacinths, Tulips, Jonquils and Narcissus. Covent Garden Flower Market is rife with these messengers of spring. The Princess of Wales set the fashion for pink Tulips this season, in London, having a preference for them, hence, the English ladies declare pink Tulips the most desirable, excluding all other tints, causing the florists to demand an exorbitant price, which, unfortunately, is of no benefit to the grower, who sorrows to see set aside the new Tulips with tints as varied as their names.



A BASKET OF FLOWERS AT DR. WARREN BEY'S RECEPTION.

ure to the lovers of fruit and flowers, especially those who have made a collection of Orchids and understand their distinctions and names. The inference drawn was, that they were considered as gems and needed no setting to bring out their effect; and Lilacs, Snowdrops and Carnations, which are coming in abundance now, were selected instead, and with Violets for the finger bowls—and not, as of old, laid at the plate of every guest—gave great satisfaction.

"OVER THE CHANNEL."

Leaving cold winds and fog, a few minutes' inconvenience at sea, forgotten almost as the white cliffs of Dover came to view, then a few hours' more journey by rail, brought myself and a large party of Americans into dear old, selfish, capricious Paris.

Flowers greeted the eye upon all sides, button-hole bouquets and nosegays were offered for sale by the persistent flower-woman, and before trunks and boxes were released from the dismal custom house—an affair of thirty minutes, at least—we were all decorated with breast-knots of Lily of the Valley—"San Remo Violets"—

and white Lilacs. They might have been refuse flowers from the markets and shops, they were none the less redolent and acceptable.

American enterprise is known in Paris under the title of *Paris Herald*, sold at every station, and how the Americans call for it upon arrival, drinking in the health of the founder or proprietor at every glance up and down the newsy column—no other word expresses it—feeling nearer home, and that the ocean is not so formidable—its distance has been abridged by a real American newspaper, in which you can or may know all that has transpired at home, and all that is to be seen in Paris.

It is Lent, you would hardly know it; true, there are no more balls or evenings at home, but they have been replaced by dinners and teas, and flowers are in greater demand than at any season of the year. It would seem there has never been a moment when artists have been more engaged in devising new floral designs, destined to grace the homes of society leaders; they must be entirely new, different from last season, to give a floral sensation to the entertainment.

At a noted banquet given upon the 22d of February, by Dr. EDWARD WARREN BEY, at 15 Rue Caumartin, Paris, the display of floral decorations was most marvelous. The entire inside of his house was converted into a floral bower—costly pictures were hidden by tropical exotics, mirrors were trimmed with red, white and blue flowers, curtains looped back with garlands composed of our national colors, while the American and French flags were draped over the doors and peeped out of corners, which were filled with Ferns the most beautiful Paris could produce, the drawing-rooms were illuminated by immense chandeliers with innumerable candles, and the office was made a bower of Roses and assigned to the band of the Opera Comique. More than two hundred guests were present, composed of the first people of the American colony and the city of Paris. This fête will long be remembered, proving that his love of country and patriotism was fresh in his heart as the sad and memorable day when he said adieu to America, and became an exile in Egypt. The title, Bey, was given him by the Khedive of Egypt, in recognition of his

rare skill as physician and surgeon. I was a happy and privileged guest, and was permitted to sketch one of the many baskets which graced the banquet table, selecting it because of its original form, and wisely suspecting, too, it was a royal favor sent to him in loving appreciation of the occasion, for he is the most celebrated American physician in Paris. I would that I were a word painter to do justice to the floral scene. I could not refrain from demanding of WILLIAM, (the colored servant and friend who followed him in exile,) the lamp of Aladdin, nor refrain from laughing at his comical reply that he expected I'd find it, too, if I searched for it, as Doctor WARREN BEY always had everything! And he said it with an emphasis.

The basket was made of white silk cord with bands of red and blue ribbon run through alternately. The handle, in shape of a horse-shoe, was composed of white Lilacs, and wrapped around with red and blue ribbon. The top of the handle was ornamented with a bright bow of red watered ribbon, and on the very top of the handle rested or perched a white pigeon. The interior of the basket was composed of red and white Roses reposing on a bed of blue Forget-me-nots, or Myosotis, while each side of the basket was adorned with two large red watered silk ribbon bows.

From the sound of merriment within an outsider might readily suppose the Americans were having a regular "At Home."

The fashionable real flowers of the day are yellow ones, Tulips, Daffodils, Mimosa, and the small double yellow Narcissus. They light up well, for no fairy lamps are used in Paris, the flowers are illuminated with a light within. New china ornaments, called tapestry china, for holding flowers are much in vogue. Crocuses are dedicated to St. Valentine, and were sent upon February 14th as floral Valentines. The Snowdrop is called the Fair Maid of February. Lilies of the Valley in pots, wrapped around with fancy colored Indian gauze, are hung in corners, and replace the old time hanging basket, which is banished from in-doors, but holds its place upon the balcony. Gloire de Dijon Roses, with Maidenhair Ferns, are worn with black lace toilets.

Floral garniture for ball toilets are sold by leading florists, the set composed of long garlands for the skirt, shoulder sprays, corsage bouquets, and clusters for the hair, the flowers corresponding in tone with the toilet. They transform a simple tulle dress into an exquisite toilet.

At a fashionable five o'clock tea, the tea room was draped with heavy gold-colored artists' serge, upon which were attached garlands of compact Ferns and bright tinted leaves or foliage; the mantel was ornamented with a lambrequin of moss and inexpensive flowers, such as Tulips and Crocuses. The piano was hidden from view by large Ferns, a miniature artificial fountain of perfumed waters, and by use of jets these waters were playing. Birds in cages, hidden by flowers, were joining in chorus to the music. A floral balloon dangled beneath the gas fixtures. In one corner was the little table with dainty tea cloth, upon which was laid the service of Worcester China, and an immense crystal bowl was filled with Roses, one of which was presented by the hostess to each guest with the hospitable cup of tea. Several young ladies aided in toasting bread upon large silver toasting forks, before a bright wood fire, for the weather is cold and there is skating upon the lake of the "Bois," and "all Paris will be there."

It was the custom, last season, to send large sprays or branches of flowers, instead of made bouquets, principally Lilacs and Marguerites; it is rumored that this spring branches of Cherry, Apple, Peach and Pear blossoms will be tied with silver or gilt tinsel ribbon, to which will be attached a card with little phrases in French, such as "*un petit mot*," "*bon jour*," etc.

Snowballs will be tied together with bow knots of changeable pale green silk ribbon, or the new dark shade of green called *nuance absinthe*, and will be offered in immense branches or boughs, and it is reasonable to add, and believe, too, that there will be no war in all Europe, unless it be the "*bataille des fleurs*" later in the season, about which I hope to tell you. ADA LOFTUS.

I believe one of the greatest factors in the work of elevating and refining the people, will be an increased interest in the cultivation of flowers. PROF. WALCH.

PEAR CULTURE.

In relation to the question what progress is being made with Pear Culture in Western New York, at the last meeting of the Western New York Horticultural society, the following discussion ensued:

MR. HOOKER believed in manure first, last and every time. It is impossible to get good Pears without manure and proper pruning. For fire-blight he used the Saunders remedy, which consists of lime, sulphur, and a little carbolic acid, made into a wash and applied to the bodies of the trees, and to the foliage after the trees are out of blossom. This remedy was an old one, and had been laughed at, but he lost his Duchess from the blight, where he failed to use it. He applied it with a force pump. To a peck of lime, use ten pounds of sulphur, and two ounces of carbolic acid. He would not say it was infallible, but never lost a tree in three hundred, where it was used. One year they omitted to use it, and had more blight, but have never omitted it since; washes the bodies of the trees about May 1.

MR. MOODY said the wash referred to was good. He had never applied it to the foliage, but had not lost one out of ten thousand orchard trees in five years, and had used this wash. The acid gave out an odor which spreads all over the orchard, and he thought destroyed fungus.

MR. BARRY asked what variety of trees Mr. Moody had in so many.

MR. MOODY, three-fourths Bartlett, and some Kieffer. We spray the trees regularly with London purple. I also cultivate the Duchess as a dwarf. We have not been so fortunate with the Anjou lately. The Kieffer has paid us better than anything we have had, but don't know how long it will last.

MR. HOAG, Lockport, had never used this preparation on his several thousand Pears. He thought these pests were periodical. He believed weak lye or soap good for washing the trees; the most effectual remedies were frequent cultivation and washing.

MR. WILLARD quoted some prices paid for Kieffer Pears shipped from Geneva, N. Y., to Philadelphia; and said this Pear was wanted everywhere.

MR. BARRY thought the Kieffer might probably please some people, but he did not think it "the coming Pear." Mr. Willard was an enthusiast. The Kieffer was not a Pear of the highest quality. If there was a market for a Pear of that grade, it only showed what a future there was for Pears of much finer quality.

In answer to the question—"What is the most profitable market Pear, and what is the best winter Pear for home use?" MR. BARRY said:

The question as to the best winter Pear was one offering scope for wide discussion. It was all a matter of taste. For an early Pear he thought the Anjou unequalled. Following that came the Winter Nélis, which was superior to anything; next Josephine. These followed each other, and comprised a very choice collection, deserving of the highest praise. The Winter Nélis does not make as handsome a tree, but was regular and heavy in its bearing; and he could not recommend any variety more profitable. Nurserymen did not care to propagate it much, because it had to be top grafted. Nevertheless if Winter Nélis was wanted, they must have that kind of a tree. The Josephine was not strong enough, and not enough trees to the acre. The Easter Beurré with others, had been superceded by these varieties. The Lawrence was an admirable,

early variety, a little earlier than Anjou, and might be included in the four.

MR. B. H. HARRIS said there were two ways of looking at this question;—One is from the nursery-men's point of view, and the other from that of the fruit-grower. After eighteen years experience he would advise not to set out any variety of which the price of the fruit would not increase with the quantity produced.

MR. BARRY thought there was no danger of an over-production of choice fruit. Every one in that audience ought to have fine Pears on the table, every day through the winter, and until that time came, they were not doing their duty as fruit growers; and if it was true that such should be the case with them, it was also true as regards every man in the country. If it was possible for nurserymen to produce fine fruit it was just as easy for every member of that society, and they ought to make their money from them just as well. The profits should not be confined to a few. It is utterly impossible to get too much good fruit, and such always commands a high price. If every man present would make up his mind to plant more fruit trees of a good kind, they would be money in pocket ten or fifteen years from that time. There was nothing they could hand down to their children better than a good garden or farm, with plenty of good fruit.

MR. PIERCE, of Ohio, did not agree with all Mr. Barry's remarks, especially about the Winter Nélis, the fruit of which was so worked upon by the insect on his place, that he could not get any, while the Lawrence, in the same row did splendidly. He had at that time ten bushels of the Winter Nélis lying on the ground, the fruit having dropped from the trees, and the leaves before the fruit. The Bartlett and Beurre Bosc did well.

MR. WILLARD said different culture and different localities showed different results. The Winter Nélis required high culture.

MR. BARRY had seen a block of trees in an orchard so injured in the fruit by the curculio that it was utterly valueless, while only twenty or forty trees away other blocks were uninjured.

MR. SMITH said if the ground was treated with salt it would kill the curculio.

MR. PIERCE said he had not always succeeded in killing it by cultivation.

A RAISIN GRAPE.

The Raisin industry of California promises to become very important and fairly remunerative. The climate of the central and southern part of the state is most favorable for drying the fruit, and there is the center of this enterprise. The two important factors in raisin-making are a suitable variety of Grape, and a dry climate—one not subject to dews, fogs or rains for weeks, while the fruit is drying. Though the region of California mentioned is not exempt from fogs and rains, yet they are infrequent, and the necessity of protection to the drying fruit is not experienced often enough to make that feature of the work very burdensome. The variety of Grape from which the raisins are made is the Muscat of

Alexandria, which is better known to most of our readers as the Malaga Grape of the shops, which comes to us from Spain, packed in cork dust, in small casks. A white Grape makes a raisin of better color than a red or dark one, though in Europe both red and black varieties are used to some extent. In Santa Clara County, California, where the temperature at the drying season is not so high, nor the air so dry as more southern counties, the grape-growers have resorted to the use of dryers or evaporators, and with success, and the practice is extending; many tons of raisins were made there, in that manner, last year. The method is to expose to the sun for a few days, and then remove to the evaporator, and finish up with a slow heat.

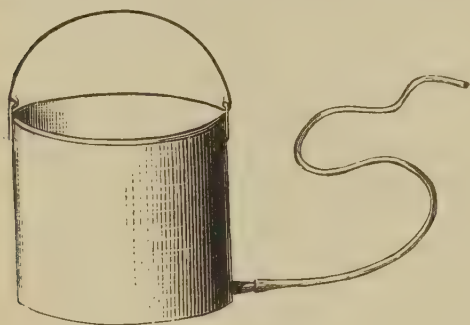
In the South of Europe, the making of raisins by artificial heat has long been practiced, and such practice is not now a question of experiment. The only question in regard to it is how much better it can now be done with modern devices and improvements than heretofore with less perfect appliances.

With these facts in view, there is no reason why we should not be able to make raisins in this region if we can produce the right variety of Grape for the purpose, and this we believe we now possess in the Diamond. It is a beautiful white Grape, of good size, with a thin, but sufficiently tough skin, seeds small and few, ripens early, flesh breaking, melting, no toughness at the center, no foxiness, sweet, and superior in quality to Muscat of Alexandria. Why should not this Grape, grown in the lake regions of this state be made into raisins? The demand for the fresh fruit of this variety for the table, will probably be so great that several years will elapse before raisin-making from it will be undertaken, but, in time, there is good reason to believe the Diamond will be preserved in this manner.

AZALEAS.—R. M. L. will find that Azaleas will do well at a south or east window, and with a low temperature—one about 60°, or even less—and good ventilation. Water regularly and do not let the pots go dry. In summer plunge the pot over the rim in the garden, under light shade.

WATER CAN FOR HOUSE PLANTS.

I want to tell you how we water our house plants in the bay window. I took a small tin pail and had a small tin tube soldered on close to the bottom, to extend out parallel with the bottom, then took about two feet of one-quarter inch



rubber tube drawn tightly on the tin spout (total cost twenty cents), then with the pail in one hand and the end of the tube in the other, pinching the tube to stop the flow, to go from one pot to another, can reach all the plants with ease, and with less danger of breaking them, and with a little practice can hold the pail a little higher to make the pressure, and spray the foliage equal to a rose on a garden pot.

F. D. P

GARDEN NOTES FROM ELMDALE.

Many varieties of trees and shrubs are propagated by grafting or budding on a free-growing stock of some allied sort, and the fact that such stocks are free-growing naturally tends to cause the buds on them to start in advance of the more delicate portion of the growth. All buds should be rubbed off promptly upon their appearance below the point of union. To neglect this soon gives things which were planted as being rare and costly a coarse and weedy appearance, as a result of having their superior parts choked out. The trouble of keeping these down is the chief objection to budded or grafted Roses, and I plant as largely as possible those sorts which do as well on their own roots as on foreign stock.

A well kept rockery is always a pleasing feature, especially so on a verdant lawn. Aside from its being out of the ordinary run of flower beds, it affords a means of growing certain kinds of plants which would not do as well in any other location. One should have an outlook

to beauty in arranging the stones. The entire list of plants classed as "Alpine Plants" in catalogues are suitable for planting thereon, besides many native plants, and some greenhouse varieties may be added where desirable.

I have been overhauling my supply of Tuberous Begonias and making a planting of some just received from England, so with the recollection of their extreme beauty, last season, fresh in mind, I cannot refrain from bestowing a few of the many deserved words of praise which they merit.

First of all, their culture is simple. Whether grown in pots or in the open ground, the bulbs should be first started by potting in light, rich soil, placing the crown just above the soil, and shifted as they require, or planted out about the first of June, in this latitude. The only thing to guard against being a glaring sun in summer and a low temperature while starting into growth. Probably, in no family of plants has the good effects of hybridizing been so prominently shown as in the Begonia, the result thereof being both double and single flowers of innumerable shades and colors. Good drainage is very essential both with pot culture and when planted out. Though used with good effect in a number of places, I enjoy most a large bed, oval in form, raised about eighteen inches from the ground, under the protection and shade of some of the large Elm trees, from which Elmdale takes its name. This spot is where the children have their swing, hammock, croquet and lawn tennis, and, in fact, is the favorite comfort-taking place of the whole family in the summer. The bed is raised by driving double posts in the ground at intervals of four feet apart, and intertwining wild Grape vines, finishing with rough bark which holds the earth in place, and altogether makes a quite creditable piece of work.

I have planted it differently for several years, and find that the Tuberous Begonias give the best satisfaction, although two years ago, when it was filled with Fuchsias, it was almost a marvel of loveliness; the plants, seemingly appreciating being thus protected from tearing winds and too hot sun by the trees, vied with each other to make the most display.

OUR YOUNG PEOPLE.

A TRIPLE ENTERTAINMENT.

IN TWO CHAPTERS.—CHAPTER I.

April had gone by with its Easter and its Easter flowers, its sunny and showery days of fitful moods, its miracles of resurrection—from bursting tree buds to the thrusting of grass blades through the earth; and the last week of the month had found the young people in almost every home employing their spare moments in making May baskets that should be ready for the coming of “the merrie, merrie May.”

And now the May had come, and the enchanting music of the door bells—which had announced the fresh basket stealthily deposited, while scampering feet hurried the donors out of sight—had ceased their happy jangle, and in one family the subject of birthday parties was being warmly discussed.

“I understand perfectly well,” Chauncey was saying, “that we are to keep early hours—that is, all are to come and go early, and as we can each have but one party during the year, that we’ve chosen it shall be on our birthdays; but what I’m objecting to now, is, that I don’t think I need to have all those little kids mixed up with my company, this time, just because Gracie’s birthday and mine happen to come together. We boys have grown so big now, and all the girls we know have stretched away up, till they’d look like women only for their short gowns, and I know they’ll think its awfully stupid in me to invite them here to meet a lot of chits.”

“Yes, but you don’t know it all yet,” interrupted Juliet. “You know I had no company on my birthday, because of sickness in the house, and so mamma said, this morning, that I might invite my friends, too, because there is room for all, and because Auntie Grace—yes, and little Hugh—will be here, and she so enjoys a crowd of young people and is a capital hand to contrive entertainments for them, as you well remember; but I don’t think we ought to have Gracie’s little tads here.”

By this time Gracie’s sensitive little

soul was full to bursting. She fled to her mother, and burying her face in her lap, cried and sobbed until her whole tiny frame shook with the inward tumult. Mrs. Raymond saw that something unusual must have occurred to wound so deeply the feelings of her ten-year old daughter.

“What is it, my child? Tell me, dear,” she kept saying, as she smoothed Gracie’s hair and patted her shoulders, gradually soothing the force of the first out-break. “Don’t you know, dear, mamma can fix it all up, no matter what it is?”

But Gracie sobbed out, “You can’t—can’t never—fix this all up.”

“Why can’t I? Will not my little Gracie tell me all about it?”

“I don’t care now—for no—no birthday party,—but I don’t want—Chauncey and Juliet—to call my friends—little kids—and chits—and tads—’cause they’re just as good as their friends—if they aint so big—and they brought me the prettiest May baskets of anybody’s.” And her sobs broke out afresh.

“If this is the trouble, I can fix it all up *beautifully*. Don’t cry any more, dear, but listen to our talk in the next room.” And Mrs. Raymond left her, swinging the door wide open as she passed out.

“Chauncey,” said she, “Gracie’s loyal little soul is stirred to its depths because you and Juliet have spoken disrespectfully of her friends. I am surprised that either of you could have been so rude—so unkind. I infer that you have objected, too, to her company being present with yours. It is as much my privilege to plan pleasure for one child as for another, remember.”

“But, mamma,” pleaded Chauncey, “you know how it is—my ‘set’ have grown so large now that they won’t thank me for inviting them to meet a lot of little kids—.”

“Stop! stop and think. Will not those young children be the very brothers and sisters of the older ones? You know

that, with very few exceptions, they will be. It is not likely your friends will be greatly disturbed by seeing their own young folks having a merry time to themselves, up stairs or down, wherever they find the rooms least invaded by you 'big ones.' The chief trouble has been that the older ones, in playing games or charades, often make a draft from their number. Besides, when two or three of a family are present, they are company for each other home, thus saving trouble for their elders. In some of the nicest houses in the country the companions of different members of the family meet in this way, and where the house is spacious enough, it is delightful for all the parents to be present also.

"Each of you has a friend so unfortunate as to have neither brother nor sister. They will, doubtless, envy the rest of you, as they look over the merry group of younger ones. Such solitary children usually crave home companions near their own age, when they get old enough to think about it.

"But, Chauncey, you just repeated one of those offensive epithets that so insulted your sister. Am I to understand that you still feel that her friends will spoil your company by their presence?"

"No, no; of course not. I'd forgotten they'd all be related to each other."

"Too many families forget the same, it would seem, by the way they encourage the drawing of strong lines between the different ages in one community of families."

"I'm sure," said Juliet, "that I'm sorry for what I said, and I'll tell Gracie so."

Then Gracie was called in, and her brother and sister assured her that they had changed their minds, and thought mamma's plan would be much the nicest. But Gracie was not quite satisfied. Presently she said:

"I don't want you to call my friends by those ugly names any more, for they're just as good as I am."

"O, well, we won't," said Chauncey, "for you belong to that lot, and we don't want you to be called names, even if they're as innocent as 'goosey-goose,' which, of course, doesn't mean you," and he caught her up and kissed her.

Then she was very happy, and whispered to her mother:

"You did know how to fix it up beau-

tiful, didn't you?" And her mother smiled and nodded, yes.

The next day came Auntie Grace, with her jolly, chubby boy, only four-and-a-half years old, but as full of stories, fabricated from his imagination, as his mamma was of ingenious contrivance. When he once got started to story-telling, his gravity, during the laughter which his quaint recitals excited, only increased their merriment. Very soon they found he was quite given to making what he called speeches, shouting and gesticulating in imitation of vehement oratory, all of which promised great amusement to his cousins. As this refers to a genuine and very real boy, space ought to be found for samples of his peculiar traits; but his mamma must come first in this case.

Under express instructions the coming party was not to be mentioned to her until she should have been fortified by at least one night's refreshing sleep. But her very dressing-room was invaded next morning—preceded, of course, by askant little taps—and an eager little tongue had rapidly made up for lost time. Hence, at the breakfast table, some of the party might have supposed that Auntie Grace had been dreaming out family secrets, as she remarked:

"And so there's to be a house full of young folks while I'm here; that will be delightful."

Then Chauncey hastened to say that he was depending on her to furnish something entirely new for their entertainment. She smiled, and said she would see what she could do; while Gracie, sitting very close, indeed, whispered,

"Your little name-sake wants something nice for her company, too."

Juliet only talked with her eyes, and her aunt responded:

"Your company will be sandwiched between the others, and will be sure to enjoy the best of both."

From that time until evening, when the guests began to arrive, many were the consultations in which Auntie Grace was called on to take a part. Even down in the kitchen she was besought for new ideas. One of these was to bake one cake in a large milk-pan, first placing in the center a tall tumbler full of water, well buttered outside. This was to be lifted out with a spiral motion, when the

cake was to be taken from the pan, and afterwards returned to hold fresh water and flowers.

Another device was for Gracie's special delectation. Some dough—ready for frying doughnuts—was rolled quite thin and cut into pieces by using a good sized tea-cannister lid. The edges were then thoroughly wet, and on one-half of the number was laid porcelain toys, not more than an inch long—chiefly dolls, black and white—varied by now and then a choice sugar-plum or nut kernel. On these were laid the other pieces of dough, the edges pinched tightly together and then dropped into boiling hot lard. While cooking they swelled into perfectly round balls, and when done were rolled, piping hot, in granulated sugar, and left to cool. To uninitiated children, it is a puzzle to know how the toys got inside the balls.

But Auntie Grace was too full of expedients for us to detail them all, for we must catch one or two of those developed during the festive evening. When first charades were called for, Chauncey purposely referred to those which represent the name of a book or an author, knowing his Aunt had developed an original one of that class, though ignorant of its plot or solution.

So the oldest girl and boy were selected for a private interview with her, and were soon drilled in the parts they were to act. Then the company was told that the coming charade, of one act only, would imply the name of an *author-and-his-works*; as though one should speak of "Scott's Novels," or "McCauley's Essays."

Then some sliding doors were opened and an editor was seen very busily writing at his table, with the terrible wastebasket beside him, half filled with ominous-looking crumples of manuscripts. Then the editor, without looking up, answers a very distinct rap at a side door, and in sweeps a stiff, prim-looking woman, in trailing skirts and high-pointed bonnet, announcing herself as a literary person, having poems to sell for publication in his "Juvenile Magazine."

Editor. Poems!

Literary Person. Yes, sir, poems. Pray don't look so fierce. I'm sure you'll be pleased with them; at any rate, your readers are certain to be. I'll occupy

your time but a moment, and will just seat myself while I read them to you. [*Editor shrugs impatiently, while in a shrill, screechy voice the reader begins.*]

THE ROBIN.

Hear the robin sweetly sing
As it flies upon the wing;

Ed. Hold on! Do robins sing while flying?

Lit. Per. Perhaps not; but that sort of thing, you know, is poetical license. Please don't interrupt; you'll find this written in a sweetly, unaffected and artless style. I'll re-commence. [*Editor groans.*]

Hear the robin sweetly sing
As it flies upon the wing;
When the dew is on the grass
You can hear its little task.
When winter comes it flies to the south
And there it fills its little mouth.
When summer comes again,
It takes great labor and pains
To build its cunning nest,
And hatch its little guests.

Ed. Bosh! [*Makes a grimace, and spits as though nauseated.*] I have no use for such drewling. I'll bid you good-day. I am very busy.

Lit. Per. But, Mr. Editor, I have another poem here, that I *must* read you, and I know you'll like it. It's for declamation—very pathetic; you know, such pieces are always in great demand. Your boy readers will snatch at it. Listen, please.

THE DEFUNCT PUPPY.

Ed. The what?

Lit. Per. Defunct—defunct puppy. It is very touching.

Oh, dear! oh, dear! my dog is dead;
I cannot think what made him die;
His eyes are popping from his head;
Boohoo—oh, dear! it makes me cry.

[*Here the editor gives a contemptuous sniff, and with elbows on the table covers his ears with his hands, while the reader raises her voice.*]

For fear my dog might run away,
A cord around his neck I tied,
And made it tighter every day;
And now he's gone and up and died.

He was the cutest little dog
That ever barked a big bow-wow,
Or ever sniffed a hollow log,
Or ever chased a truant cow.

Boohoo—I can't keep back the tears,
For my poor dog I weep and wail;
He had two eyes-es and two ears,
But only—had—one little tail.

Ed. [*Picking up a book and slamming it down.*] How many tails did you want him to have? I assure you, madam, your doggerel rhyme is fit for nothing but to light a fire. There's much better stuff than that here in this waste-basket. So, I am forced to wish you a very good-day. [*Waves his hand toward the door.*]

Lit. Per. I am certainly surprised that an editor can be so blind to his interest—so unjust to his readers as to deprive them of the very cream of poesy. But, perhaps, a parody might suit you better. I have one here on that popular juvenile classic, called "Mary and her Little Lamb," which you cannot fail to approve. [*Editor goes to writing furiously.*] This is the last. I'll not hinder you much longer.

A PARODY.

Mary had a little sheep,
Its fleece was black as night;
And ev'rywhere that Mary went
That sheep kept just in sight.

She followed it to school one day,
According to the rule;
It scared the lessons all away
To see a sheep in school.

So, teacher tured poor Mary out,
But still she lingered near,
And waited patiently about,
Till sheepie did appear.

What makes the sheep love——

Ed. [*Jumping to his feet.*] Zounds! This is insufferable! One of us will leave this room instantly.

Lit. Per. [*Hastily rising, and speaking wrathfully.*] Of course, I am ready to go now, myself. I'm convinced, sir, you'll live to repent having scorned these effusions of my genius. And now to prove that the paltry sum, which you should have been glad to pay me, was the least of my concern, I shall consign these poems to the flames, instead of selling them elsewhere. [*Lays the three manuscripts on the grate, and indignantly marches out of the room, as the sliding doors are closed.*]*

Then a dozen surprised voices from among the tittering listeners said at once, "O, she *burns* her poems," while others repeated, "She burns her poems," till, finally, some one shouted, "*Burns' Poems!*" and all knew at once that they had the right solution.

After this, Gracie's friends, a few of whom had already made the acquaintance of little Hugh, began to clamor for a speech or story from him, as a part of their entertainment.

MARIA BARRETT BUTLER.

* Should this chance to be read aloud, the listeners may here be challenged to guess the author and his works, indicated at the close of charade.

SPRING HAS COME.

Sweet spring, with her bounding step, is here,
With the swallow's song and the wild bee's hum;
And the scent of Apple tree bloom is near,
All the fair attendants of spring have come.
The Violets hide in the long, rank grass,
Heavily bending their heads with the dew;
Lower they droop as the fickle winds pass—
Do they mourn their lovers as earth-maids do?
The meadows are dotted with snowy sheen
Of the humble Houstonia's starry bloom;
The Cowslip, in robes of yellow and green,
Laughs gaily, for gone is the winter's gloom.
Smile and be happy, O, souls who have wept,
While under the snows the wealth of spring slept.

LILLA N. CUSHMAN.



ER LIEBT MICH.

Fortune-telling by the mystic power which some flowers and plants are supposed

to possess, has long been believed in by the simple peasantry of old countries. Especially are these flowers supposed to foretell the future happiness of youth or maiden. GÆTHER tells us, in his *Faust*, of Gretchen pulling off the petals of a flower, one by one, while she slowly repeats, with trembling lips, "*Er liebt mich—liebt mich nicht.*"

It is not only the fair Gretchen of Germany who lists her future in this way, but many a maid of our own day has laughingly plucked the petals of the field Daisy, and slowly repeated the lines written by Miss LANDON :

" Now, gentle flower, I pray thee tell
If my love loves, and loves me well ;
Now I number the leaves for my lot ;
He loves me not—he loves me—loves me
not—
He loves me—yes, thou last leaf, yes !
I'll pluck thee not, for that sweet guess."

The Dandelion, too, when in its downy state, is said to possess the same prophetic power, and will tell the maiden if she has a lover, whether he be north, south, east or west, and when he is coming to her.

Who doubts the power of the four-leaf Clover, that it will bring to the lucky finder whatever he may wish, provided he will but wear it for three days in his shoes.

It is said that JAMES RUSSELL LOWELL once sent a dried flower from Germany to a young lady across the Atlantic, with the following lines :

Perhaps, some fair-haired German maid
Hath plucked one from the self-same
stalk,
And numbered over, half afraid,
Its petals, in her evening walk.

He loves me—loves me not, she cries ;
He loves me more than earth or heaven,
And then glad tears have filled her eyes,
To find the number was uneven.

And thou must count its petals well,
Because it is a gift from me,
And the last one of all shall tell
Something I've often told to thee.

I. M. G.



EDITOR'S MISCELLANY.

PUBLICATIONS RECEIVED.

Thanks are due Mr. Robert Manning, Secretary of the Massachusetts Horticultural Society, for a copy of "Transactions—Part One—for the year 1887." A fine portrait of Marshall P. Wilder faces the title page. The volume is full of good things, and some of them will be referred to hereafter.

Catalogue of Spraying Pumps and Garden Engines manufactured by The Goulds Manufacturing Co., Seneca Falls, N. Y. This firm manufactures a large number of spraying and water throwing instruments and engines. They now supply new styles of double-acting force pumps, expressly adapted to the use of fruit-growers for spraying trees with poisonous solutions, as now proved necessary in the case of Apple orchards. The merits of these pumps should be examined by orchardists.

Hand Book of Plant Dissection, by J. C. Arthur, D. Sc., Charles R. Barnes, M. A., and John M. Coulter, Ph. D., editors of the *Botanical Gazette*. Published by Henry Holt & Co., of New York. It is with great pleasure that we bring this book to the notice of our readers. Such of them as have passed beyond the elementary principles in the study of botany must have felt the need of assistance, such as is rendered in the present work. Although within the past ten years botanical works have appeared which supply a great amount of information that inducts the student in histology, yet this has been done in connection with other subjects; this is the first work of the kind directed solely to the study and manipulation of the various plant tissues. The subject in all its branches is treated with great precision and simplicity, and yet comprehensiveness. The arrangement is excellent, and the book will be found to be adapted to the use of schools and colleges, or of students working by themselves. It is an admirable text-book, and marks an advance in botanical literature.

The Geological History of Plants, by Sir J. W. Dawson; New York, D. Appleton & Co. This is one of the International Scientific Series, and in it there is brought together and systematically arranged a great mass of information that has long been accumulating and has heretofore appeared only in fragmentary portions in magazines, proceedings of societies, government reports and other documents. The book is beautifully illustrated, the style of writing is clear and simple, as is everything that Dr. Dawson has written, and the subject to the botanist and the geologist is of transcendent interest, tracing, as it does, the vegetation of the globe through its whole existence, a term measured by hundreds of thousands, or, more probably, millions, of years. From the different strata that form the crust of the globe have been gathered a large number of specimens of fossil plants, ranging from delicate Ferns to gigantic tree stems. The relations of these plants to each other is so clearly shown that we may perceive that each succeeding age has modified the preceding forms; the sum of the changes is so great that only by tracing the intermediate forms can the likeness of those ancient plants be recognized in the vegetation of to-day. So strongly marked, however, are the affinities that, as we consider them, we "doubt not through the ages one increasing purpose runs." Life, both animal and vegetable, has been a continuous stream through all the lengthened ages of our planet, and the history of that life is written in the rocks, and we who will may read.

American Farm Laws and Game Laws, by Henry Austin, Esq., of the Boston Bar. Boston, Charles C. Soule, publisher. This is a valuable digest, bringing within a small compass the principal laws that relate peculiarly to the farming and rural communities. It will prove useful to the country resident for reference, but will probably be a greater aid in showing him the law's uncertainties than in directing his course in any special case. The work in itself is good, but to make good use of it will depend on individual judgment. A volume of this character has long been needed.

Heartsease and Rue. This is the title of a volume of poems which Lowell has lately sent out. Published by Houghton, Mifflin & Co., of Boston. The principal poem in the collection is entitled "Agassiz," and is a beautiful panegyric on the great scientist. The poems are grouped under the heads of friendship, sentiment, fancy, humor and satire, and epigrams, and among them are many gems that will find admirers. How well the publishers have done their work in this volume it is needless to say, for who has ever known them to send out a book in poor form? An excellent portrait of Lowell forms the frontispiece.

Lomb Prize Essays. Under this title are comprised four essays, for which an aggregate sum of \$1,100 in prizes was awarded to the writers, by Henry Lomb, of this city, through the American Public Health Association. The subjects treated are, Building a Home—Healthy Food, School Hygiene, Disinfection, and the Preventable Causes of Disease, Injury and Death. These are valuable papers and worthy of perusal by all interested in the subjects. They can be procured from Dr. Irving A. Watson, Secretary American Health Association, Concord, N. H. Price, 15 cents each, or the four together, in paper covers, 60 cents, or handsomely bound in cloth for \$1.00.

How to get Rich in the South, by W. H. Harrison, Jr. W. H. Harrison, Jr., Publishing Co., Chicago, Ill. The design of this book is to bring into a small compass an account of the agricultural resources of the extreme Southern States. The advantages to the agricultural community of raising a variety of crops, instead of confining attention to a single staple, like Cotton, or, even in Florida allowing the Orange to overshadow all other fruit interests, are well indicated. But there is one feature of this book which runs all through it that cannot be commended, and that is its clear-cut estimates of profits that may be made in the different departments of industry to which it relates. Whether it is cattle or horse breeding, or mixed farming, or raising different kinds of fruits or garden truck, there is the inevitable estimate of profit, and, we regret to add, in most cases the estimate is way beyond the highest hopes of a misguided enthusiast. If one can subject this ever-pervading influence while he reads the book, which is not probable, then the real information conveyed may be valuable. On the whole, we think the influence of the book will be pernicious, especially to young and inexperienced persons.

Reports from Department of Agriculture, Bulletin No. 17, of the Division of Chemistry, contains the Records of Experiments conducted by the Commission of Agriculture in the manufacture of sugar from Sorghum and Sugar canes. So favorable is the account of the manufacture of sugar from Sorghum, at Fort Scott, Kansas, last year, that similar work this season will be regarded with great interest.